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Del Norte Pesticide Site

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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

UNITED STATES OF AMERICA and CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL,

Plaintiffs,

v.

DEL NORTE COUNTY,

Defendant.

CIVIL ACTION NO. C 01 4847 CW

CONSENT DECREE

Entered on Civil Docket 3/6/02

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I. BACKGROUND

A. The United States of America ("United States"), on behalf of the Administrator of the United States Environmental Protection Agency ("EPA"), and the California Department of Toxic Substances Control ("DTSC") (collectively the "Plaintiffs"), have filed concurrently with this Consent Decree a complaint in this matter (the "Complaint") pursuant to Sections 106 and 107 of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. §§ 9606 and 9607, with respect to a facility known as the Del Norte County Pesticide Storage Area Superfund Site ("Site"), located approximately one mile from Crescent City in Del Norte County, California.

B. The United States and DTSC, in their Complaint, seek, inter alia, to compel Del Norte County to perform certain response actions and to pay certain response costs that have been and will be incurred by the United States and DTSC in response to alleged releases and threatened releases of hazardous substances from the Site.

C. Defendant Del Norte County does not admit any liability to the Plaintiffs arising out of the transactions or occurrences alleged in the complaint, nor does it acknowledge that the release or threatened release of hazardous substance(s) at or from the Site constitutes an imminent or substantial endangerment to the public health or welfare or the environment.

D. Pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the Site on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on September 21, 1984, 49 Fed. Reg. 37070.

E. In response to a release or a substantial threat of a release of a hazardous substance(s) at or from the Site, EPA commenced a Remedial Investigation and Feasibility Study ("RI/FS") for the Site pursuant to 40 C.F.R. § 300.430, which was completed in 1985.

F. On September 27, 1985, EPA selected a remedial action for the Site in the original "Record of Decision." EPA modified the remedial action selected for the Site in the "Explanation

of Significant Differences" dated September 21, 1989.

G. Between 1985 and 1997, EPA implemented the remedial action selected in the original 1985 Record of Decision, as modified by the 1989 Explanation of Significant Differences. EPA completed the remedial action for soil contamination at the Site. EPA also designed and implemented the groundwater pump and treatment system to address groundwater contamination at the Site. The groundwater pump and treatment system was successful at removing and treating contaminated groundwater. Between 1994 and 1997, however, it became evident that although an indeterminate amount of contaminated groundwater remained under the Site, the pump and treatment system was no longer able to extract contaminated groundwater because the contamination had reached asymptotic levels. Therefore, EPA decided to amend the remedial action selected in the original 1985 Record of Decision, as modified by the 1989 Explanation of Significant Differences.

H. Pursuant to Section 117 of CERCLA, 42 U.S.C. § 9617, EPA published notice of the proposed final plan for amended remedial action on March 1, 2000, in a major local newspaper of general circulation. EPA provided an opportunity for written and oral comments from the public on the proposed plan for amended remedial action. The community comments are available to the public as part of the administrative record upon which the Regional Administrator based the selection of the response action.

I. The decision by EPA on the amended remedial action to be implemented at the Site is embodied in the Amendment #1 to the Record of Decision ("ROD Amendment #1"), executed on August 29, 2000, on which DTSC has given its concurrence. The ROD Amendment #1 includes EPA's explanation for any significant differences between the final plan and the final proposed plan as well as a responsiveness summary to the public comments. Notice of the final plan was published in accordance with Section 117(b) of CERCLA.

J. Based on the information presently available to EPA and DTSC, EPA and DTSC

believe that the Work (as defined below) will be properly conducted by Del Norte County if conducted in accordance with the requirements of this Consent Decree and its appendices.

K. EPA and DTSC have agreed that DTSC will make decisions regarding the day-to-day implementation of the Work by the Defendant under this Consent Decree and that EPA will make decisions regarding the periodic reviews required by Section 121(c) of CERCLA, whether the Performance Standards have been met, and the selection of any additional response actions for the Site.

L. Solely for the purposes of Section 113(j) of CERCLA, the Response Action selected by the ROD Amendment #1 and the Work to be performed by Del Norte County shall constitute a response action taken or ordered by the President.

M. The Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and implementation of this Consent Decree will expedite the cleanup of the Site and will avoid prolonged and complicated litigation between the Parties, and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, it is hereby Ordered, Adjudged, and Decreed:

II. JURISDICTION

1. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1345, and 42 U.S.C. §§ 9606, 9607, and 9613(b) and supplemental jurisdiction over any claims arising under the laws of California pursuant to 28 U.S.C. §1367. This Court also has personal jurisdiction over Defendant Del Norte County. Solely for the purposes of this Consent Decree and the underlying complaint, Del Norte County waives all objections and defenses that it may have to jurisdiction of the Court or to venue in this District. Del Norte County shall not challenge the terms of this Consent Decree or this Court's jurisdiction to enter and enforce this Consent Decree.

III. PARTIES BOUND

2. This Consent Decree applies to and is binding upon the United States and DTSC, and upon Del Norte County and its successors and assigns. Any change in government status of the Defendant including, but not limited to, any transfer of assets or real or personal property, shall in no way alter the Defendant's responsibilities under this Consent Decree.

3. Defendant Del Norte County shall provide a copy of this Consent Decree to each contractor hired to perform the Work (as defined below) required by this Consent Decree and to each person representing Del Norte County with respect to the Site or the Work and shall condition all contracts entered into hereunder upon performance of the Work in conformity with the terms of this Consent Decree. Del Norte County or its contractors shall provide written notice of the Consent Decree to all subcontractors hired to perform any portion of the Work required by this Consent Decree. Del Norte County shall nonetheless be responsible for ensuring that its contractors and subcontractors perform the Work contemplated herein in accordance with this Consent Decree. With regard to the activities undertaken pursuant to this Consent Decree, each contractor and subcontractor shall be deemed to be in a contractual relationship with the Defendant within the meaning of Section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3).

IV. DEFINITIONS

4. Unless otherwise expressly provided herein, terms used in this Consent Decree which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Consent Decree or in the appendices attached hereto and incorporated hereunder, the following definitions shall apply:

"CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601 *et seq.*

"Consent Decree" shall mean this Decree and all appendices attached hereto (listed in Section XXIX). In the event of conflict between this Decree and any appendix, this Decree shall control.

"Covenant to Restrict Use of Property" shall mean the Covenant to Restrict Use of Property attached as Appendix E.

"Day" shall mean a calendar day unless expressly stated to be a working day. "Working day" shall mean a day other than a Saturday, Sunday, or State holiday. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or State holiday, the period shall run until the close of business of the next working day.

"Defendant" shall mean Del Norte County, California, including all of its departments, agencies, offices and instrumentalities.

"DTSC" shall mean the California Department of Toxic Substances Control and any successor departments or agencies.

"DTSC Future Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that DTSC incurs or pays after the day that this Consent Decree is lodged with the Court in reviewing or developing plans, reports and other items pursuant to this Consent Decree, verifying the Work, or otherwise implementing, overseeing, or enforcing this Consent Decree, including, but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, the costs incurred pursuant to Sections VII, VIII (including, but not limited to, the cost of attorney time and any monies paid to secure access and/or to secure or implement institutional controls including, but not limited to, the amount of just compensation), XI, and Paragraph 59 of Section XVII.

"DTSC Past Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that DTSC paid at or in connection with the Site through the day that this Consent Decree is lodged with the Court.

"Effective Date" shall be the effective date of this Consent Decree as provided in Paragraph 78.

"EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

"Groundwater Monitoring Plan" shall mean the Groundwater Monitoring Plan described in Section VI of this Consent Decree.

"Interest," shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.

"Municipal sewage sludge" shall mean any solid, semi-solid, or liquid residue removed during the treatment of municipal waste water or domestic sewage, and may include residue removed, all or in part, during the treatment of wastewater from manufacturing or processing operations, provided that such residue has essentially the same characteristics as residue removed during the treatment of domestic sewage.

"Municipal solid waste" shall mean household waste and solid waste collected from non-residential sources that is essentially the same as household waste. While the composition of such wastes may vary considerably, municipal solid waste generally is composed of large volumes of non-hazardous substances (e.g., yard waste, food waste, glass, and aluminum) and can contain small amounts of other wastes as typically may be accepted in RCRA Subtitle D landfills.

"National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

"Paragraph" shall mean a portion of this Consent Decree identified by an arabic numeral or an upper case letter.

"Parties" shall mean the United States, the California Department of Toxic Substances Control, and Del Norte County.

"Performance Standards" shall mean the cleanup standards and other measures for achievement of the goals of the Remedial Action, set forth in Part 2, Paragraph G of the ROD Amendment #1.

"Plaintiffs" shall mean the United States and DTSC.

"RCRA" shall mean the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901 et seq. (also known as the Resource Conservation and Recovery Act).

"ROD Amendment #1" shall mean the EPA Amendment #1 to the Record of Decision relating to the Site, signed on August 29, 2000 by the Regional Administrator, EPA Region IX, or his/her delegate, and all attachments thereto. The ROD Amendment #1 is attached as Appendix A.

"Remedial Action" shall mean those activities, to be undertaken by the Defendant to implement the ROD Amendment #1, in accordance with the Groundwater Monitoring Plan and other plans approved by DTSC or EPA.

"Section" shall mean a portion of this Consent Decree identified by a roman numeral.

"Site" shall mean the Del Norte County Pesticide Storage Area Superfund Site, located at 2650 West Washington Blvd., Cresent City, Del Norte County, California, and depicted generally on the map attached as Appendix B. "Site" shall include any place where hazardous substances released at, from, or on the Del Norte County Pesticide Storage Area have come to be located.

"State" shall mean the State of California.

"United States" shall mean the United States of America, including any department, agency, or instrumentality of the United States.

"United States Future Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the United States incurs or pays at or in connection with the Site after the lodging of this Consent Decree with the Court.

"United States Past Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the United States paid at or in connection with the Site through the day that this Consent Decree is lodged with the Court, plus Interest on all such costs which has accrued pursuant to 42 U.S.C. § 9607(a) through such date.

"Waste Material" shall mean (1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); and (4) any "hazardous substance" under California Health & Safety Code Section 25316.

"Work" shall mean all activities Defendant is required to perform under this Consent Decree, except those required by Section XXV (Retention of Records).

V. GENERAL PROVISIONS

5. Objectives of the Parties. The objectives of the Parties in entering into this Consent Decree are to protect public health or welfare or the environment at the Site by the implementation of the Remedial Action at the Site by Defendant Del Norte County, to reimburse certain response costs of the Plaintiffs, and to resolve the claims of Plaintiffs against Del Norte County as provided in this Consent Decree.

6. Commitments by Defendant Del Norte County. Del Norte County shall finance and perform the Work in accordance with this Consent Decree, the ROD Amendment #1, the

Groundwater Monitoring Plan and all work plans and other plans, standards, specifications, and schedules set forth herein or developed by Defendant and approved by DTSC or EPA pursuant to this Consent Decree. Defendant shall also reimburse the United States for a portion of United States Past Response Costs and DTSC for a portion of the DTSC Past Response Costs and all of DTSC Future Response Costs as provided in this Consent Decree.

7. Compliance With Applicable Law. All activities undertaken by Del Norte County pursuant to this Consent Decree shall be performed in accordance with the requirements of all applicable federal and state laws and regulations. Del Norte County must also comply with all applicable or relevant and appropriate requirements of all federal and state environmental laws as set forth in the ROD Amendment #1. The activities conducted pursuant to this Consent Decree, if approved by DTSC or EPA, shall be considered to be consistent with the NCP.

8. Permits.

a. As provided in Section 121(e) of CERCLA and Section 300.400(e) of the NCP, no permit shall be required for any portion of the Work conducted entirely on-site (i.e., within the areal extent of contamination or in very close proximity to the contamination and necessary for implementation of the Work). Where any portion of the Work that is not on-site requires a federal or state permit or approval, Defendant shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals.

b. Defendant may seek relief under the provisions of Section XIV (Force Majeure) of this Consent Decree for any delay in the performance of the Work resulting from a failure to obtain, or a delay in obtaining, any permit required for the Work, provided that the requirements of Paragraph 8.a are met.

c. This Consent Decree is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

9. Notice to Successors-in-Title.

a. At least 30 days prior to the conveyance of any interest in property located within the Site including, but not limited to, fee interests, leasehold interests, and mortgage interests, the Defendant shall give the grantee written notice of (i) this Consent Decree, and (ii) the Covenant to Restrict Use of Property that confers a right of access to the Site and that confers a right to enforce restrictions on the use of such property as set forth in to Section VIII (Access and Institutional Controls). At least 30 days prior to such conveyance, the Defendant shall also give written notice to DTSC and EPA of the proposed conveyance, including the name and address of the grantee, and the date on which notice of the Consent Decree and the Covenant to Restrict Use of Property was given to the grantee.

b. In the event of any such conveyance, Defendant's obligations under this Consent Decree, including, but not limited to, its obligation to provide or secure access and institutional controls, as well as to abide by such institutional controls, pursuant to Section VIII (Access and Institutional Controls) of this Consent Decree, shall continue to be met by the Defendant. In no event shall the conveyance release or otherwise affect the liability of the Defendant to comply with all provisions of this Consent Decree, absent the prior written consent of DTSC and EPA. If DTSC and the United States approve, the grantee may perform some or all of the Work under this Consent Decree.

VI. PERFORMANCE OF THE WORK BY DEFENDANT

10. Groundwater Monitoring Plan. Within 30 days after the Effective Date of this Consent Decree, Defendant shall submit to DTSC and EPA a Groundwater Monitoring Plan to perform monitoring of the groundwater wells that exist at the Site according to the ROD Amendment #1 (locations of existing wells identified on the map at Appendix C). The Groundwater Monitoring Plan shall consist of at least the following:

a. a Sampling and Analysis Plan ("SAP") that shall identify sampling

procedures, the number of samples, duplicates and blanks to be collected, sampling locations, sampling schedule, and the sampling monitoring reports to be submitted. The SAP shall describe how all six existing wells (as identified on the map attached as Appendix C) will be monitored. Initially, the sampling schedule identified in the SAP shall provide for at least semi-annual sampling and the sampling locations identified in the SAP shall include at least wells MW-104, MW-105, MW-107 and MW-26. After two (2) years of sampling, pursuant to Paragraph 13.b below, Defendant may request to modify the sampling schedule to provide for annual sampling and/or reduce the number of sampling locations subject to the restrictions set forth in Paragraph 13.c;

b. a Quality Assurance Project Plan ("QAPP") that is consistent with the NCP and applicable EPA guidance and that meets the requirements of Paragraph 14 below;

c. a Health and Safety Plan; and

d. a Well Maintenance Plan.

11. Approval of Groundwater Monitoring Plan and Other Submissions.

a. After review of the Groundwater Monitoring Plan or submissions under the Groundwater Monitoring Plan to be submitted for approval pursuant to this Consent Decree, DTSC, after reasonable opportunity for review and comment by the EPA, shall: (1) approve, in whole or in part, the submission; (2) approve the submission upon specified conditions; (3) modify the submission to cure the deficiencies; (4) disapprove, in whole or in part, the submission, directing that the Defendant modify the submission; or (5) any combination of the above. However, DTSC shall not modify a submission without first providing Defendant at least one notice of deficiency and an opportunity to cure within 14 days, except where to do so would cause serious disruption to the Work or where previous submission(s) have been disapproved due to material defects and the deficiencies in the submission under consideration indicate a bad faith lack of effort to submit an acceptable deliverable. In no event shall DTSC approve a Groundwater Monitoring Plan that does not comply with the requirements of Paragraphs 10 and 13.

b. In the event of approval, approval upon conditions, or modification by DTSC, pursuant to Paragraph 11.a.(1-3) or (5), Defendant shall proceed to take any action required by the plan, report, or other item, as approved or modified by DTSC subject only to its right to invoke the Dispute Resolution procedures set forth in Section XV (Dispute Resolution) with respect to the modifications or conditions made by DTSC. In the event that DTSC modifies the submission to cure the deficiencies pursuant to Paragraph 11.a.(3) and the submission has a material defect, the Plaintiffs retain the right to seek stipulated penalties, as provided in Section XVI (Stipulated Penalties).

c. Resubmission of Plans.

(1) Upon receipt of a notice of disapproval pursuant to Paragraph 11.a.(4) or (5), Defendant shall, within 30 days or such longer time as specified by DTSC in such notice, correct the deficiencies and resubmit the plan, report, or other item for approval. Any stipulated penalties applicable to the submission, as provided in Section XVI, shall accrue during the 30-day period or otherwise specified period but shall not be payable unless the resubmission is disapproved or modified due to a material defect as provided in Paragraphs 11.d and 11.e.

(2) Notwithstanding the receipt of a notice of disapproval pursuant to Paragraph 11.a.(4) or (5), Defendant shall proceed, at the direction of DTSC, to take any action required by any non-deficient portion of the submission. Implementation of any non-deficient portion of a submission shall not relieve Defendant of any liability for stipulated penalties under Section XVI (Stipulated Penalties).

d. In the event that a resubmitted plan, report or other item, or portion thereof, is disapproved by DTSC, DTSC, after reasonable opportunity for review and comment by the EPA, may again require the Defendant to correct the deficiencies, in accordance with the preceding Paragraphs. DTSC also retains the right to modify or develop the plan, report or other item.

Defendant shall implement any such plan, report, or item as modified or developed by DTSC, subject only to its right to invoke the procedures set forth in Section XV (Dispute Resolution).

e. If upon resubmission, a plan, report, or item is disapproved or modified by DTSC due to a material defect, Defendant shall be deemed to have failed to submit such plan, report, or item timely and adequately unless the Defendant invokes the dispute resolution procedures set forth in Section XV (Dispute Resolution) and DTSC's action is overturned pursuant to that Section. The provisions of Section XV (Dispute Resolution) and Section XVI (Stipulated Penalties) shall govern the implementation of the Work and accrual and payment of any stipulated penalties during Dispute Resolution. If DTSC's disapproval or modification is upheld, stipulated penalties shall accrue for such violation from the date on which the initial submission was originally required, as provided in Section XVI.

f. All plans, reports, and other items required to be submitted to DTSC or EPA under this Consent Decree shall, upon approval or modification by DTSC or EPA, be enforceable under this Consent Decree. In the event DTSC or EPA approves or modifies a portion of a plan, report, or other item required to be submitted to DTSC or EPA under this Consent Decree, the approved or modified portion shall be enforceable under this Consent Decree.

12. Implementation of the Approved Groundwater Monitoring Plan. Defendant shall implement the Groundwater Monitoring Plan as approved by DTSC until the Performance Standards are achieved.

13. Modifications of the Approved Groundwater Monitoring Plan.

a. Except as provided in Paragraph 13.c below, if DTSC, after reasonable opportunity for review and comment by the EPA, determines that modification of the approved Groundwater Monitoring Plan is necessary to achieve and maintain the Performance Standards or to carry out and maintain the effectiveness of the remedy set forth in the ROD Amendment #1, DTSC may require that such modification be incorporated in the approved Groundwater Monitoring

Plan. Provided, however, that a modification may only be required pursuant to this Paragraph to the extent that it is consistent with the scope of the remedy selected in the ROD Amendment #1. Modifications pursuant to this Paragraph shall not be considered "material" pursuant to Paragraph 82.

(1) For the purposes of this Paragraph 13 only, the "scope of the remedy selected in the ROD Amendment #1" is containment (by natural attenuation) with monitoring of existing groundwater wells as described in Section F, page 9-10 of the ROD Amendment #1 attached as Appendix A.

(2) If Defendant objects to any modification determined by DTSC to be necessary pursuant to this Paragraph, it may seek dispute resolution pursuant to Section XV (Dispute Resolution), Paragraph 47 (Record Review). The Groundwater Monitoring Plan shall be modified in accordance with final resolution of the dispute.

(3) Defendant shall implement any work required by any modifications incorporated in the Groundwater Monitoring Plan in accordance with this Paragraph.

(4) Nothing in this Paragraph shall be construed to limit DTSC's or EPA's authority to require performance of further response actions as otherwise provided in this Consent Decree.

b. Except as provided in Paragraph 13.c below, Defendant may request modification of the Groundwater Monitoring Plan by submitting the requested modification in writing to DTSC and EPA. Provided, however, that Defendant shall not request to modify the Groundwater Monitoring Plan to reduce the frequency to annual monitoring or to reduce the number of sampling locations until after at least two years of monitoring have occurred. DTSC, after reasonable opportunity for review and comment by EPA, shall approve or disapprove any requested modification. Modifications under this Paragraph shall not be considered "material" pursuant to Paragraph 82. In the event that DTSC disapproves of a requested modification under this Paragraph,

Defendant may seek dispute resolution pursuant to Section XV (Dispute Resolution), Paragraph 47 (Record Review).

c. Except as provided in Paragraph 19.b, the Groundwater Monitoring Plan shall not be modified to provide for less than at least annual sampling and the sampling of one monitoring well within the contamination plume and one monitoring well down-gradient from the contamination plume.

14. Quality Assurance, Sampling, and Data Analysis.

a. Defendant shall use quality assurance, quality control, and chain of custody procedures for all compliance and monitoring samples in accordance with "EPA Requirements for Quality Assurance Project Plans for Environmental Data Operation," (EPA QA/R5; "Preparing Perfect Project Plans," (EPA /600/9-88/087)), and subsequent amendments to such guidelines upon notification by DTSC or EPA to Defendant of such amendment. Amended guidelines shall apply only to procedures conducted after such notification. If relevant to the proceeding, the Parties agree that validated sampling data generated in accordance with the QAPP(s) and reviewed and approved by DTSC or EPA shall be admissible as evidence, without objection, in any proceeding under this Consent Decree. Defendant shall ensure that DTSC and EPA personnel and their authorized representatives are allowed access at reasonable times to all laboratories utilized by Defendant in implementing this Consent Decree. In addition, Defendant shall ensure that such laboratories shall analyze all samples submitted by DTSC pursuant to the QAPP for quality assurance monitoring. Defendant shall ensure that the laboratories it utilizes for the analysis of samples taken pursuant to this Consent Decree perform all analyses according to accepted EPA methods. Accepted EPA methods consist of those methods which are documented in the "Contract Lab Program Statement of Work for Inorganic Analysis" and the "Contract Lab Program Statement of Work for Organic Analysis," dated February 1988, and any amendments made thereto during the course of the implementation of this Consent Decree. Defendant shall ensure that all laboratories it uses for analysis of samples taken pursuant to this Consent Decree participate in an EPA or EPA-equivalent

QA/QC program. Defendant shall ensure that all field methodologies utilized in collecting samples for subsequent analysis pursuant to this Consent Decree will be conducted in accordance with the procedures set forth in the QAPP approved by DTSC as part of the Groundwater Monitoring Plan.

b. Upon request, the Defendant shall allow split or duplicate samples to be taken by DTSC and/or EPA, or their authorized representatives. Defendant shall notify DTSC and EPA not less than 30 days in advance of any sample collection activity unless shorter notice is agreed to by DTSC. In addition, DTSC and EPA shall have the right to take any additional samples that DTSC or EPA deem necessary. Upon request, DTSC and EPA shall allow the Defendant to take split or duplicate samples of any samples they take as part of the Plaintiffs' oversight of the Defendant's implementation of the Work.

15. Notwithstanding any provision of this Consent Decree, the United States and DTSC hereby retain all of their information gathering and inspection authorities and rights, including enforcement actions related thereto, under CERCLA, RCRA and any other applicable statutes or regulations.

16. Defendant acknowledges and agrees that nothing in this Consent Decree constitutes a warranty or representation of any kind by Plaintiffs that compliance with the approved Groundwater Monitoring Plan or other requirements of this Consent Decree will achieve the Performance Standards.

17. All reports and other documents submitted by Defendant to DTSC and/or EPA which purport to document Defendant's compliance with the terms of this Consent Decree shall be signed by an authorized representative of the Defendant.

VII. REMEDY REVIEW

18. Periodic Review. Defendant shall conduct any studies and investigations as requested by DTSC or EPA, in order to permit EPA, in consultation with DTSC, to conduct reviews of whether

the Remedial Action is protective of human health and the environment at least every five years as required by Section 121(c) of CERCLA and any applicable regulations.

19. EPA Selection of Further Response Actions.

a. If EPA determines, after consultation with DTSC, at any time, that the Remedial Action is not protective of human health and the environment, EPA may select further response actions for the Site in accordance with the requirements of CERCLA and the NCP. Selection of further response actions under this Paragraph is not subject to the dispute resolution process in Section XV.

b. Beginning five years after the Effective Date, and no more than once every five years, Defendant may petition EPA to terminate the requirement of groundwater monitoring selected as part of the Remedial Action in the ROD Amendment #1 and as required by this Consent Decree. Such a request shall be based on sampling data collected by Defendant pursuant to the approved Groundwater Monitoring Plan that demonstrates that the Performance Standards have been met. EPA will make a decision on any request by the Defendant under this Paragraph after consultation with DTSC. A decision by EPA to grant Defendant's request to terminate the groundwater monitoring required by this Consent Decree shall be considered a "material" modification under Paragraph 82. A decision by EPA not to grant Defendant's request to terminate the groundwater monitoring as required by this Consent Decree shall be subject to dispute resolution pursuant in Section XV, Paragraph 47 (Record Review).

20. Opportunity To Comment. Defendant and, if required by Sections 113(k)(2) or 117 of CERCLA, the public, will be provided with an opportunity to comment on any further response actions proposed by EPA as a result of the review conducted pursuant to Section 121(c) of CERCLA and to submit written comments for the record during the comment period.

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VIII. Access and Institutional Controls

21. With respect to the Site, Defendant shall:

a. commencing on the date of lodging of this Consent Decree, provide the United States, and its representatives, including EPA and its contractors, and DTSC, and its representatives, including contractors, with access at all reasonable times to the Site, or other property, for the purpose of conducting any activity related to this Consent Decree including, but not limited to, the following activities:

(1) Monitoring the Work;

(2) Verifying any data or information submitted to the DTSC or to the United States;

(3) Conducting investigations relating to contamination at or near the Site;

(4) Obtaining samples;

(5) Assessing the need for, planning, or implementing additional response actions at or near the Site;

(6) Implementing the Work pursuant to the conditions set forth in Paragraph 59 of this Consent Decree;

(7) Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Defendant or its agents, consistent with Section XX (Access to Information);

(8) Assessing Defendant's compliance with this Consent Decree; and

(9) Determining whether the Site or other property is being used in a

manner that is prohibited or restricted, or that may need to be prohibited or restricted, by or pursuant to this Consent Decree;

b. commencing on the date of lodging of this Consent Decree, refrain from using the Site, or such other property owned or leased by the Defendant, in any manner that would interfere with or adversely affect the integrity or protectiveness of the remedial measures to be implemented pursuant to this Consent Decree. Such restrictions include, but are not limited to:

(1) restricting access to the Site to protect existing groundwater monitoring wells (identified on the map attached as Exhibit C) and to prevent use of contaminated groundwater;

(2) prohibiting use of contaminated groundwater;

(3) prohibiting the use of the Site or any other property owned or leased by Defendant for purposes that interfere with the containment of the contaminated groundwater under the Site, that interfere with monitoring of the existing groundwater monitoring wells at the Site (identified on the map attached as Exhibit C), or that damage, alter, destroy, or compromise the integrity of the existing groundwater monitoring wells at the Site;

(4) restricting the use of the real property described in Appendix D to industrial/commercial purposes and prohibiting the use of the real property described in Appendix D for a residence (including but not limited to any mobile home or factory built housing, constructed or installed for use as residential human habitation), for a hospital for humans, for a public or private school for persons under 21 years of age, and for a day care center for children;

(5) prohibiting the installation and/or pumping of water-producing

wells, including but not limited to water supply, irrigation and private wells, on the real property described in Appendix D and any property owned by Defendant that is adjacent to the real property described in Appendix D.

c. commencing with the lodging of this Consent Decree, prohibit the installation and operation of any water-producing wells that could cause the plume of contaminated groundwater under the Site to move or that could cause contaminated groundwater under the Site to be brought to the surface. For any water-producing wells within the area one quarter (1/4) mile from the boundary of the real property described in Appendix D and for any water-producing wells that will serve more than one (1) single family residence within the area one (1) mile from the boundary of the real property described in Appendix D, which Defendant proposes to install or to operate or which Defendant proposes to issue a permit for installation or operation, Defendant shall demonstrate that the restrictions described in this Paragraph are met. Defendant shall provide DTSC, with a copy to EPA, all information necessary to evaluate any request to install or to operate a water-producing well under this Paragraph. In the event that DTSC, after concurrence by EPA, determines that a proposed water-producing well does not meet the restrictions described in this Paragraph, DTSC shall inform Defendant in writing. Defendant shall not install or operate the well or issue a permit for the installation or operation of the well unless and until DTSC approves Defendant's proposal. DTSC shall use its best efforts to provide its determination within sixty (60) days of the submittal of the information by Defendant.;

d. within 30 days of the Effective Date of this Consent Decree, submit written documentation to DTSC and EPA demonstrating that all departments, agencies, instrumentalities, offices of Defendant, including, but not limited to Del Norte County Department of Agriculture, Del Norte County Community Development Department, Del Norte County Department of Health and Human Services, and Del Norte County Counsel's Office, and all lessees of Defendant's property adjacent the real property described in Appendix D have been provided with a copy of this Consent Decree and with appropriate instructions to comply with the

restrictions listed in this Paragraph; and

e. within 30 days of the Effective Date of this Consent Decree, execute and submit to DTSC the Covenant to Restrict Use of Property attached at Appendix E. Once it is fully executed, Defendant shall record the Covenant to Restrict Use of Property in the real property records of Del Norte County, State of California.

22. If DTSC or EPA determines that additional land or groundwater use restrictions in the form of state or local laws, regulations, ordinances or other governmental controls are needed to implement the remedy selected in the ROD Amendment #1, ensure the integrity and protectiveness thereof, or ensure non-interference therewith, Defendant shall cooperate with DTSC's and EPA's efforts to secure such governmental controls.

23. Notwithstanding any provision of this Consent Decree, the United States and DTSC retain all of their access authorities and rights, as well as all of their rights to require land/water use restrictions, including enforcement authorities related thereto, under CERCLA, RCRA and any other applicable statute or regulations.

IX. PROJECT COORDINATORS

24. Within 20 days of lodging this Consent Decree, Defendant, DTSC and EPA will notify each other, in writing, of the name, address and telephone number of their respective designated Project Coordinators and Alternate Project Coordinators. If a Project Coordinator or Alternate Project Coordinator initially designated is changed, the identity of the successor will be given to the other Parties at least 5 working days before the changes occur, unless impracticable, but in no event later than the actual day the change is made. The Defendant's Project Coordinator shall have the technical expertise sufficient to adequately oversee all aspects of the Work. The Defendant's Project Coordinator shall not be an attorney for the Defendant in this matter. He or she may assign other representatives, including other contractors, to serve as a Site representative for oversight of performance of daily operations during remedial activities.

25. Plaintiffs may designate other representatives, including, but not limited to, EPA and DTSC employees, and federal and State contractors and consultants, to observe and monitor the progress of any activity undertaken pursuant to this Consent Decree. EPA's Project Coordinator and Alternate Project Coordinator shall have the authority lawfully vested in a Remedial Project Manager (RPM) and an On-Scene Coordinator (OSC) by the National Contingency Plan, 40 C.F.R. Part 300. Both EPA's Project Coordinator (or Alternate Project Coordinator) and DTSC's Project Coordinator (or Alternate Project Coordinator) shall have authority, consistent with the National Contingency Plan and after consultation with the other Plaintiff, to halt any Work required by this Consent Decree and to take any necessary response action when s/he determines that conditions at the Site constitute an emergency situation or may present an immediate threat to public health or welfare or the environment due to the release or threatened release of the Waste Material.

X. ASSURANCE OF ABILITY TO COMPLETE WORK

26. Establishment of Financial Security

a. Within 30 days of entry of this Consent Decree, Defendant shall establish and maintain financial security to the satisfaction of EPA in the amount of $50,000.00 in one or more of the following forms:

(1) A surety bond guaranteeing performance of the Work;

(2) One or more irrevocable letters of credit equaling $50,000.00; or

(3) A trust fund.

b. The financial security mechanism established by Defendant as required by Paragraph 26.a shall provide that the money may be paid to DTSC or EPA in the event that DTSC or EPA takes over implementation of the Work under this Consent Decree.

27. In the event that EPA determines, after reasonable opportunity for review and comment by DTSC, at any time that the financial assurances provided pursuant to this Section are inadequate, Defendant shall, within 30 days of receipt of notice of EPA's determination, obtain and present to EPA for approval one of the other forms of financial assurance listed in Paragraph 26 of this Consent Decree. Defendant's inability to demonstrate financial ability to complete the Work shall not excuse performance of any activities required under this Consent Decree.

28. If Defendant can show that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 26 above after entry of this Consent Decree, Defendant may, on any anniversary date of entry of this Consent Decree, or at any other time agreed to by the Parties, reduce the amount of the financial security provided under this Section to the estimated cost of the remaining work to be performed. Defendant shall submit a proposal for such reduction to EPA, in accordance with the requirements of this Section, and may reduce the amount of the security upon approval by EPA. In the event of a dispute, Defendant may reduce the amount of the security in accordance with the final administrative or judicial decision resolving the dispute.

29. Defendant may change the form of financial assurance provided under this Section at any time, upon notice to and approval by EPA, provided that the new form of assurance meets the requirements of this Section. In the event of a dispute, Defendant may change the form of the financial assurance only in accordance with the final administrative or judicial decision resolving the dispute.

XI. EMERGENCY RESPONSE AND REPORTING REQUIREMENTS

30. In the event of any action or occurrence during the performance of the Work which causes or threatens a release of Waste Material from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Defendant shall, subject to Paragraph 31, immediately take all appropriate action to prevent,

abate, or minimize such release or threat of release, and shall immediately notify the DTSC's Project Coordinator, or, if the Project Coordinator is unavailable, DTSC's Alternate Project Coordinator. If neither of these persons is available, the Defendant shall notify DTSC's Office of Emergency Response at (916) 323-3600 between 8am and 5pm, and at (800) 852-7550 between 5pm and 8am. The Defendant shall also notify the EPA Project Coordinator or the Alternate EPA Project Coordinator (in the event of the unavailability of the EPA Project Coordinator). Defendant shall take such actions in consultation with DTSC's Project Coordinator (or other available authorized DTSC officer) and EPA's Project Coordinator and in accordance with all applicable provisions of the Health and Safety Plans and any other applicable plans or documents developed pursuant to this Consent Decree. In the event that Defendant fails to take appropriate response action as required by this Section, and DTSC takes such action instead, Defendant shall reimburse DTSC all costs of the response action not inconsistent with the NCP pursuant to Section XII (Payment For Response Costs). In the event that Defendant fails to take appropriate response action as required by this Section, and EPA takes such action instead, all costs of the response action not inconsistent with NCP shall be considered United States Future Response Costs.

31. Nothing in the preceding Paragraph or in this Consent Decree shall be deemed to limit any authority of the United States or of DTSC or any other State agency: a) to take all appropriate action to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of Waste Material on, at, or from the Site; or b) to direct or order such action, or seek an order from the Court, to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of Waste Material on, at, or from the Site, subject to Section XVII (Covenants Not to Sue by Plaintiffs).

32. Upon the occurrence of any event during performance of the Work that Defendant is required to report pursuant to Section 103 of CERCLA or Section 304 of the Emergency Planning and Community Right-to-know Act (EPCRA), Defendant shall within 24 hours of the

onset of such event orally notify the DTSC Project Coordinator or the Alternate DTSC Project Coordinator (in the event of the unavailability of the DTSC Project Coordinator), or, in the event that neither the DTSC Project Coordinator or Alternate DTSC Project Coordinator is available, DTSC's Office of Emergency Response at (916) 323-3600 between 8am and 5pm, and at (800) 852-7550 between 5pm and 8am. The Defendant shall also notify the EPA Project Coordinator or the Alternate EPA Project Coordinator (in the event of the unavailability of the EPA Project Coordinator). These reporting requirements are in addition to the reporting required by CERCLA Section 103 or EPCRA Section 304.

33. Within 20 days of the onset of an event described in Paragraph 32, Defendant shall furnish to Plaintiffs a written report, signed by the Defendant's Project Coordinator, setting forth the events which occurred and the measures taken, and to be taken, in response thereto. Within 30 days of the conclusion of such an event, Defendant shall submit a report setting forth all actions taken in response thereto.

XII. PAYMENTS FOR RESPONSE COSTS

34. Payments for United States and DTSC Past Response Costs.

a. Within 30 days of the Effective Date, Defendant shall pay to the United States (i) $50,000.00 in payment for United States Past Response Costs, and (ii) Interest on the $50,000.00 from the day this Consent Decree is lodged with the Court until the day of payment. Payment shall be made by FedWire Electronic Funds Transfer ("EFT") to the U.S. Department of Justice account in accordance with current EFT procedures, referencing the USAO File Number, EPA Site ID #09-33, and DOJ Case Number 90-11-3-836. Payment shall be made in accordance with instructions provided to the Defendant by the Financial Litigation Unit of the United States Attorney's Office for the Northern District of California following lodging of the Consent Decree. Any payments received by the Department of Justice after 4:00 p.m. (Eastern Time) will be credited on the next business day.

b. At the time of payment, Defendant shall send notice that payment has been made to the United States, to EPA and to the Regional Financial Management Officer, in accordance with Section XXII (Notices and Submissions).

c. The total amount to be paid by the Defendant pursuant to Paragraph 34.a shall be deposited in the Del Norte County Pesticide Storage Area Site Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or transferred by EPA to the EPA Hazardous Substance Superfund.

d. Within 30 days of the Effective Date, Defendant shall pay to the DTSC i) $50,000.00 in payment for DTSC Past Response Costs, and (ii) Interest on the $50,000.00 from the day this Consent Decree is lodged with the Court until the day of payment, in the form of a certified or cashier's check made payable to Cashier, California Department of Toxic Substances Control and shall bear on its face both the docket number of this proceeding and the phrase "Site No. 20025." The Defendant shall send the certified or cashier's check to Cashier, DTSC Accounting, P.O. Box 806, Sacramento, CA 95812-0806.

35. Payments for DTSC Future Response Costs.

a. Defendant shall reimburse DTSC for all DTSC Future Response Costs not inconsistent with the National Contingency Plan and that are included in the quarterly notices to the Defendant required by Paragraph 35.b below. The Defendant shall pay such DTSC Future Response Costs on a quarterly basis, within sixty (60) days of receipt of each notice sent by DTSC pursuant to Paragraph 35.b below. Each such payment shall be made by certified or cashier's check, made payable to Cashier, California Department of Toxic Substances Control and shall bear on its face both the docket number of this proceeding and the phrase "Site Code 20025." Each check shall be sent to Cashier, DTSC Accounting, P.O. Box 806, Sacramento, CA 95812-0806.

b. Subsequent to the Effective Date of this Consent Decree, DTSC will notify the Defendant in writing of the DTSC Future Response Costs that it incurred during the previous quarter pursuant to the following schedule: DTSC will notify the Defendant of the DTSC Future Response Costs that it incurred between July 1 and September 30 of any calendar year on or before December 31 of the same calendar year; DTSC will notify the Defendant of the DTSC Future Response Costs that it incurred between October 1 and December 31 of any calendar year on or before March 31 of the following calendar year; DTSC will notify the Defendant of the DTSC Future Response Costs that it incurred between January 1 and March 31 of any calendar year on or before June 30 of the same calendar year; and DTSC will notify the Defendant of the DTSC Future Response Costs that it incurred between April 1 and June 30 of any calendar year on or before October 31 of the same calendar year. DTSC's obligations under this section will begin with the first quarter that ends after the Effective Date of this Consent Decree; DTSC will notify the Defendant of the DTSC Future Response Costs that it incurred during that quarter, subsequent to the Effective Date of the Consent Decree, in accordance with the schedule set forth in this section.

36. In the event that the payments required by Paragraph 34 are not made within 30 days of the Effective Date, Interest shall continue to accrue until the date of payment. In the event that the payments required by Paragraph 35 are not made within 60 days of the Defendant's receipt of the notice, Defendant shall pay Interest on the unpaid balance. The Interest on DTSC Future Response Costs shall begin to accrue on the date of the notice and shall continue to accrue through the date of the Defendant's payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to Plaintiffs by virtue of Defendant's failure to make timely payments under this Section. The Defendant shall make all payments required by this Paragraph in the manner described in Paragraphs 34 and 35.

XIII. INDEMNIFICATION AND INSURANCE

37. Defendant's Indemnification of the United States and DTSC.

a. The United States and DTSC do not assume any liability by entering into this agreement or by virtue of any designation of Defendant as EPA's and DTSC's authorized representatives under Section 104(e) of CERCLA. Defendant shall indemnify, save and hold harmless the United States and DTSC, and their officials, agents, employees, contractors, subcontractors, or representatives for or from any and all claims or causes of action arising from, or on account of, negligent or other wrongful acts or omissions of Defendant, its officers, directors, employees, agents, contractors, subcontractors, and any persons acting on its behalf or under its control, in carrying out activities pursuant to this Consent Decree, including, but not limited to, any claims arising from any designation of Defendant as EPA's or DTSC's authorized representative under Section 104(e) of CERCLA. Further, the Defendant agrees to pay the United States and DTSC all costs they incur including, but not limited to, attorney's fees and other expenses of litigation and settlement arising from, or on account of, claims made against the United States or DTSC based on negligent or other wrongful acts or omissions of Defendant, its officers, directors, employees, agents, contractors, subcontractors, and any persons acting on its behalf or under their control, in carrying out activities pursuant to this Consent Decree. Neither the United States nor DTSC shall be held out as a party to any contract entered into by or on behalf of Defendant in carrying out activities pursuant to this Consent Decree. Neither the Defendant nor any such contractor shall be considered an agent of the United States or DTSC.

b. The United States and DTSC shall give Defendant notice of any claim for which the United States or DTSC plans to seek indemnification pursuant to Paragraph 37.a and shall consult with Defendant prior to settling such claim.

38. Defendant waives all claims against the United States and DTSC for damages or reimbursement or for set-off of any payments made or to be made to the United States or DTSC, arising from or on account of any contract, agreement, or arrangement between Defendant and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays. In addition, Defendant shall indemnify and hold

harmless the United States and DTSC with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between Defendant and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays.

39. No later than 15 days before commencing any on-site Work, Defendant shall secure, and shall maintain comprehensive general liability insurance with limits of at least 5 million dollars, combined single limit, and automobile liability insurance with limits of at least 5 million dollars, combined single limit, naming the United States and DTSC as additional insureds. In addition, for the duration of this Consent Decree, Defendant shall satisfy, or shall ensure that its contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Defendant in furtherance of this Consent Decree. Prior to commencement of the Work under this Consent Decree, Defendant shall provide to DTSC and EPA certificates of such insurance and a copy of each insurance policy. Defendant shall resubmit such certificates and copies of policies each year on the anniversary of the Effective Date. If Defendant demonstrates by evidence satisfactory to DTSC and EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering the same risks but in a lesser amount, then, with respect to that contractor or subcontractor, Defendant need provide only that portion of the insurance described above which is not maintained by the contractor or subcontractor.

XIV. FORCE MAJEURE

40. "Force majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of the Defendant, of any entity controlled by Defendant, or of Defendant's contractors, that delays or prevents the performance of any obligation under this Consent Decree despite Defendant's best efforts to fulfill the obligation. The requirement that the Defendant exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any potential

force majeure event (1) as it is occurring and (2) following the potential force majeure event, such that the delay is minimized to the greatest extent possible. "Force Majeure" does not include financial inability to complete the Work or a failure to attain the Performance Standards.

41. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree, whether or not caused by a force majeure event, the Defendant shall notify orally DTSC's Project Coordinator or, in his or her absence, DTSC's Alternate Project Coordinator or, in the event both of DTSC's designated representatives are unavailable, DTSC's Office of Emergency Response at (916) 323-3600 between 8am and 5pm, and at (800) 852-7550 between 5pm and 8am, within 15 days of when Defendant first knew that the event might cause a delay. Within 15 days thereafter, Defendant shall provide in writing to DTSC and EPA an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; the Defendant's rationale for attributing such delay to a force majeure event if it intends to assert such a claim; and a statement as to whether, in the opinion of the Defendant, such event may cause or contribute to an endangerment to public health, welfare or the environment. The Defendant shall include with any notice all available documentation supporting its claim that the delay was attributable to a force majeure. Failure to comply with the above requirements shall preclude Defendant from asserting any claim of force majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. Defendant shall be deemed to know of any circumstance of which Defendant, any entity controlled by Defendant, or Defendant's contractors knew or should have known.

42. If DTSC, after a reasonable opportunity for review and comment by EPA, agrees that the delay or anticipated delay is attributable to a force majeure event, the time for performance of the obligations under this Consent Decree that are affected by the force majeure event will be extended by DTSC, after a reasonable opportunity for review and comment by EPA,

for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation. If DTSC, after a reasonable opportunity for review and comment by EPA, does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, DTSC will notify the Defendant in writing of its decision. If DTSC, after a reasonable opportunity for review and comment by EPA, agrees that the delay is attributable to a force majeure event, DTSC will notify the Defendant in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event.

43. If the Defendant elects to invoke the dispute resolution procedures set forth in Section XV (Dispute Resolution), it shall do so no later than 15 days after receipt of DTSC's notice. In any such proceeding, Defendant shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Defendant complied with the requirements of Paragraphs 40 and 41, above. If Defendant carries this burden, the delay at issue shall be deemed not to be a violation by Defendant of the affected obligation of this Consent Decree identified to DTSC and the Court.

XV. DISPUTE RESOLUTION

44. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising between the United States and the Defendant or between DTSC and the Defendant under or with respect to this Consent Decree. However, the procedures set forth in this Section shall not apply to actions by the United States or DTSC to enforce obligations of the Defendant that have not been disputed in accordance with this Section.

45. Any dispute which arises under or with respect to this Consent Decree shall in the

first instance be the subject of informal negotiations between the parties to the dispute. The period for informal negotiations shall not exceed 20 days from the time the dispute arises, unless it is modified by written agreement of the parties to the dispute. The dispute shall be considered to have arisen when one party sends the other parties a written Notice of Dispute.

46. Statements of Position.

a. In the event that the parties cannot resolve a dispute by informal negotiations under the preceding Paragraph, then the position advanced by EPA, in the case of decisions by EPA under this Consent Decree, or by DTSC, in the case of decisions delegated to DTSC under this Consent Decree, shall be considered binding unless, within 15 days after the conclusion of the informal negotiation period, Defendant invokes the formal dispute resolution procedures of this Section by serving on the United States and DTSC a written Statement of Position on the matter in dispute, including, but not limited to, any factual data, analysis or opinion supporting that position and any supporting documentation relied upon by the Defendant. The Statement of Position shall specify the Defendant's position as to whether formal dispute resolution should proceed under Paragraph 47 or Paragraph 48.

b. Within 30 days after receipt of Defendant's Statement of Position, EPA, in the case of decisions by EPA under this Consent Decree, or DTSC, in the case of decisions delegated to DTSC under this Consent Decree, will serve on Defendant its Statement of Position, including, but not limited to, any factual data, analysis, or opinion supporting that position and all supporting documentation relied upon by EPA or by DTSC. EPA's or DTSC's Statement of Position shall include a statement as to whether formal dispute resolution should proceed under Paragraph 47 or 48. Within 15 days after receipt of EPA's or DTSC's Statement of Position, Defendant may submit a Reply.

c. If there is disagreement between the United States or DTSC and the Defendant as to whether dispute resolution should proceed under Paragraph 47 or 48, the parties

to the dispute shall follow the procedures set forth in the paragraph determined by EPA or DTSC to be applicable. However, if the Defendant ultimately appeals to the Court to resolve the dispute, the Court shall determine which paragraph is applicable in accordance with the standards of applicability set forth in Paragraphs 47 and 48.

47. Formal dispute resolution for disputes pertaining to the selection or adequacy of any response action and all other disputes that are accorded review on the administrative record under applicable principles of administrative law shall be conducted pursuant to the procedures set forth in this Paragraph. For purposes of this Paragraph, the adequacy of any response action includes, without limitation: (1) the adequacy or appropriateness of plans, procedures to implement plans, or any other items requiring approval by EPA or DTSC, as applicable, under this Consent Decree; and (2) the adequacy of the performance of response actions taken pursuant to this Consent Decree. Nothing in this Consent Decree shall be construed to allow any dispute by Defendant regarding the validity of the ROD Amendment #1's provisions.

a. An administrative record of the dispute shall be maintained by EPA or DTSC, as applicable, and shall contain all statements of position, including supporting documentation, submitted pursuant to this Section. Where appropriate, EPA or DTSC may allow submission of supplemental statements of position by the Defendant.

b. The Director of the Superfund Division, EPA Region 9, or the Deputy Director of Site Mitigation Program of DTSC, as applicable, will issue a final administrative decision resolving the dispute based on the administrative record described in Paragraph 47.a. This decision shall be binding upon the Defendant, subject only to the right to seek judicial review pursuant to Paragraph 47.c and d.

c. Any administrative decision made by EPA or by DTSC pursuant to Paragraph 47.b shall be reviewable by this Court, provided that a motion for judicial review of the decision is filed by the Defendant with the Court and served on all Parties within 10 days of

receipt of EPA's or DTSC's decision. The motion shall include a description of the matter in dispute, the efforts made by the parties to resolve it, the relief requested, and the schedule, if any, within which the dispute must be resolved to ensure orderly implementation of this Consent Decree. The United States and DTSC may file a response to Defendant's motion within thirty days of such motion.

d. In proceedings on any dispute governed by this Paragraph, Defendant shall have the burden of demonstrating that the decision of the Superfund Division Director or Deputy Director of Site Mitigation Program of DTSC, as applicable, is arbitrary and capricious or otherwise not in accordance with law. Judicial review of EPA's or DTSC's decision shall be on the administrative record compiled pursuant to Paragraph 47.a.

48. Formal dispute resolution for disputes that neither pertain to the selection or adequacy of any response action nor are otherwise accorded review on the administrative record under applicable principles of administrative law, shall be governed by this Paragraph.

a. Following receipt of Defendant's Statement of Position submitted pursuant to Paragraph 46, the Director of the Superfund Division, EPA Region 9, in the case of decisions by EPA under this Consent Decree, or Deputy Director of Site Mitigation Program of DTSC, in the case of decisions delegated to DTSC under this Consent Decree, will issue a final decision resolving the dispute. The decision of Superfund Division Director or Deputy Director of Site Mitigation Program, as applicable, shall be binding on the Defendant unless, within 10 days of receipt of the decision, the Defendant files with the Court and serves on the parties a motion for judicial review of the decision setting forth the matter in dispute, the efforts made by the parties to resolve it, the relief requested, and the schedule, if any, within which the dispute must be resolved to ensure orderly implementation of the Consent Decree. The United States and DTSC may file a response to Defendant's motion within thirty days of such motion.

b. Notwithstanding Paragraph L of Section I (Background) of this Consent

Decree, judicial review of any dispute governed by this Paragraph shall be governed by applicable principles of law.

49. The invocation of formal dispute resolution procedures under this Section shall not extend, postpone or affect in any way any obligation of the Defendant under this Consent Decree, not directly in dispute, unless DTSC and EPA or the Court agrees otherwise. Stipulated penalties with respect to the disputed matter shall continue to accrue but payment shall be stayed pending resolution of the dispute. Notwithstanding the stay of payment, stipulated penalties shall accrue from the first day of noncompliance with any applicable provision of this Consent Decree. In the event that the Defendant does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section XVI (Stipulated Penalties).

XVI. STIPULATED PENALTIES

50. Defendant shall be liable for stipulated penalties in the amounts set forth in Paragraphs 51 and 52 to the United States and to DTSC, respectively, for failure to comply with the requirements of this Consent Decree specified below, unless excused under Section XIV (Force Majeure). "Compliance" by Defendant shall include completion of the activities under this Consent Decree in accordance with all applicable requirements of law, this Consent Decree, and any plans or other documents approved by DTSC and/or EPA pursuant to this Consent Decree and within the specified time schedules established by and approved under this Consent Decree.

51. Stipulated Penalty Amounts - United States.

a. If any amounts due to the United States under this Consent Decree are not paid by the required date, Defendant shall pay to the United States as a stipulated penalty, in addition to the Interest required by Paragraph 36, $2,000 per violation per day that such payment is late. If Defendant does not comply with any other provision of this Consent Decree, Defendant shall pay to the United States, as a stipulated penalty, $1,000 per violation per day of such

noncompliance. In the event that EPA assumes performance of a portion or all of the Work pursuant to Paragraph 59 of Section XVII (Covenants Not to Sue by Plaintiffs), the Defendant shall be liable for a stipulated penalty in the amount of $15,000.00. Penalties under this Paragraph shall be in addition to and separate from any penalties Defendant may owe to DTSC under Paragraph 52.

b. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Consent Decree.

c. Following EPA's determination that Defendant has failed to comply with a requirement of this Consent Decree, EPA may give Defendant written notification of the same and describe the noncompliance. EPA may send the Defendant a written demand for the payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of whether EPA has notified the Defendant of a violation.

d. All penalties accruing under this Section shall be due and payable to the United States within 30 days of the Defendant's receipt from EPA of a demand for payment of the penalties, unless Defendant invokes the Dispute Resolution procedures under Section XV (Dispute Resolution). All payments to the United States under this Section shall be paid by certified or cashier's check(s) made payable to "EPA Hazardous Substances Superfund," shall be mailed to U.S. EPA, Attn: Superfund Accounting, P.O. Box 360863M, Pittsburgh, PA, 15251, shall indicate that the payment is for stipulated penalties, and shall reference the EPA Region and Site ID #09-33, the DOJ Case Number 90-11-3-836, and the name and address of the party making payment. Copies of check(s) paid pursuant to this Section, and any accompanying transmittal letter(s), shall be sent to the United States as provided in Section XXII (Notices and Submissions).

e. Penalties shall continue to accrue as provided in Paragraph 51.b during any dispute resolution period, but need not be paid until the following:

(1) If the dispute is resolved by agreement or by a decision of EPA that is not appealed to this Court, accrued penalties determined to be owing shall be paid to EPA within 15 days of the agreement or the receipt of EPA's decision or order;

(2) If the dispute is appealed to this Court and the United States prevails in whole or in part, Defendant shall pay all accrued penalties determined by the Court to be owed to EPA within 60 days of receipt of the Court's decision or order, except as provided in Paragraph (3) below;

(3) If the District Court's decision is appealed by any Party, Defendant shall pay all accrued penalties determined by the District Court to be owing to the United States into an interest-bearing escrow account within 60 days of receipt of the Court's decision or order. Penalties shall be paid into this account as they continue to accrue, at least every 60 days. Within 15 days of receipt of the final appellate court decision, the escrow agent shall pay the balance of the account to EPA or to Defendant to the extent that they prevail.

f. If Defendant fails to pay stipulated penalties when due, the United States may institute proceedings to collect the penalties, as well as Interest. Defendant shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 51.d.

g. Nothing in this Consent Decree shall be construed as prohibiting, altering, or in any way limiting the ability of the United States to seek any other remedies or sanctions available by virtue of Defendant's violation of this Decree or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Section 122(l) of CERCLA. Provided, however, that the United States shall not seek civil penalties pursuant to Section 122(l)

of CERCLA for any violation for which a stipulated penalty is paid hereunder, except in the case of a willful violation of the Consent Decree.

h. Notwithstanding any other provision of this Section, the United States may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Consent Decree.

i. If the United States brings an action to enforce this Consent Decree, Settling Defendants shall reimburse the United States for all costs of such action, including but not limited to costs of attorney time.

52. Stipulated Penalty Amounts - DTSC.

a. If any amounts due to DTSC under this Consent Decree are not paid by the required date, Defendant shall pay to DTSC as a stipulated penalty, in addition to the Interest required by Paragraph 36, $ 2,000 per violation per day that such payment is late. If Defendant does not comply with any other provision of this Consent Decree, Defendant shall pay to DTSC, as a stipulated penalty, $1,000 per violation per day of such noncompliance. In the event that DTSC assumes performance of a portion or all of the Work pursuant to Paragraph 59 of Section XVII (Covenants Not to Sue by Plaintiffs), the Defendant shall be liable for a stipulated penalty in the amount of $15,000.00. Penalties under this Paragraph shall be in addition to and separate from any penalties Defendant may owe to EPA under Paragraph 51.

b. Stipulated penalties are due and payable within 30 days of the date of the demand for payment of the penalties by DTSC, unless Defendant invokes the Dispute Resolution procedures under Section XV (Dispute Resolution). All payments to DTSC under this Paragraph shall be made by certified or cashier's check made payable Cashier, California Department of Toxic Substances Control and shall be sent to the address in Paragraph 34.d above. All payments shall indicate that the payment is for stipulated penalties and shall bear on its face both docket number of this proceeding and the phrase "Site Code # 20025".

c. Penalties shall accrue as provided in this Paragraph regardless of whether DTSC has notified Defendant of the violation or made a demand for payment, but need only be paid upon demand. All penalties shall begin to accrue on the day after complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of correction of the noncompliance or completion of the activity. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of the Consent Decree.

d. If DTSC brings an action to enforce this Consent Decree, Defendant shall reimburse DTSC for all costs of such action, including but not limited to costs of attorney time.

e. Payments made under Paragraph 52.a shall be in addition to any other remedies or sanctions available to DTSC by virtue of Defendant's failure to comply with the requirements of this Consent Decree.

f. Notwithstanding any other provision of this Section, DTSC may, in its unreviewable discretion, waive payment of any portion of the stipulated penalties that have accrued pursuant to this Consent Decree.

53. The payment of penalties to either EPA or DTSC shall not alter in any way Defendant's obligation to complete the performance of the Work required under this Consent Decree.

XVII. COVENANTS NOT TO SUE BY PLAINTIFFS

54. Covenants Not to Sue by United States. In consideration of the actions that will be performed and the payments that will be made by the Defendant under the terms of the Consent Decree, and except as specifically provided in Paragraph 55 of this Section, the United States covenants not to sue or to take administrative action against Defendant pursuant to Sections 106 and 107(a) of CERCLA for performance of the Work and for recovery of United States Past Response Costs. These covenants not to sue shall take effect upon the receipt by EPA of the

payments required by Section XII (Payment For Response Costs) and stipulated penalties for any late payment (Paragraph 51.a). These covenants not to sue are conditioned upon the satisfactory performance by Defendant of its obligations under this Consent Decree. These covenants not to sue extend only to the Defendant and do not extend to any other person.

55. General reservations of rights by United States. The covenants not to sue set forth above do not pertain to any matters other than those expressly specified in Paragraph 54. The United States reserves, and this Consent Decree is without prejudice to, all rights against Defendant with respect to all other matters, including but not limited to, the following:

a. liability for failure by Defendant to meet a requirement of this Consent Decree;

b. liability arising from the past, present, or future disposal, release, or threat of release of Waste Materials outside of the Site;

c. liability for future disposal of Waste Material at the Site, other than as ordered by EPA;

d. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;

e. criminal liability;

f. liability for violations of federal or state law which occur during or after implementation of the Remedial Action;

g. liability for additional response actions that EPA or DTSC determines are necessary to achieve Performance Standards, but that cannot be required pursuant to Paragraph 13 (Modification of the Groundwater Monitoring Plan);

h. liability for further response actions that EPA or DTSC selects in addition

to the Remedial Action; and

i. liability for costs incurred or to be incurred by the United States in connection with the Site that are not within the definition of United States Past Response Costs.

56. Covenant Not to Sue by DTSC. Except as specifically provided in Paragraph 57 (Reservation of Rights by the DTSC), DTSC covenants not to sue or take administrative action against Defendant pursuant to Section 107 (a) of CERCLA, 42 U.S.C. § 9607 (a) or Section 25360 of the California Health and Safety Code, to recover DTSC Past Response Costs or DTSC Future Response Costs or for performance of the Work. These covenants not to sue shall take effect upon receipt by DTSC of all payments required by Section XII (Payment For Response Costs) and stipulated penalties for any late payment (Paragraph 52.a). These covenants not to sue are conditioned upon the satisfactory performance by Defendant of its obligations under this Consent Decree. These covenants not to sue extend only to Defendant and do not extend to any other person.

57. Reservation of Rights by DTSC. The covenant not to sue set forth in Paragraph 56 does not pertain to any matters other than those expressly specified therein. DTSC reserves, and this Consent Decree is without prejudice to, all rights against Defendant with respect to all other matters, including but not limited to:

a. liability for failure of Defendant to meet a requirement of this Consent Decree;

b. liability arising from the past, present, or future disposal, release, or threat of release of Waste Materials outside of the Site;

c. liability for future disposal of Waste Material at the Site, other than as ordered by DTSC;

d. liability for damages for injury to, destruction of, or loss of natural

resources, and for the costs of any natural resource damage assessments;

e. criminal liability;

f. liability for violations of federal or state law which occur during or after implementation of the Remedial Action;

g. liability for additional response actions that EPA or DTSC determines are necessary to achieve Performance Standards, but that cannot be required pursuant to Paragraph 13 (Modification of the Groundwater Monitoring Plan);

h. liability for further response actions that EPA or DTSC selects in addition to the Remedial Action;

i. liability for injunctive relief or administrative order enforcement under Section 25100 et seq. or Section 25360 et seq. of the California Health and Safety Code except as excluded by Paragraph 56; and

j. liability for costs incurred or to be incurred by DTSC that are not within the definition of DTSC Past Response Costs or DTSC Future Response Costs.

58. Except as expressly provided in this Consent Decree nothing herein is intended, nor shall it be construed, to preclude DTSC or any other state agency, department, board, or entity, from exercising its authority under any law, statute or regulation. The covenant not to sue set forth in the preceding Paragraph does not pertain to any matters other than those expressly specified herein.

59. Work Takeover. In the event DTSC or EPA determines, after consultation with the other Plaintiff, that Defendant has ceased implementation of any portion of the Work, is seriously or repeatedly deficient or late in its performance of the Work, or is implementing the Work in a manner which may cause an endangerment to human health or the environment, DTSC or EPA

may assume the performance of all or any portions of the Work as DTSC or EPA determines necessary. Defendant may invoke the procedures set forth in Section XV (Dispute Resolution), Paragraph 47 (Record Review), to dispute DTSC's or EPA's determination that takeover of the Work is warranted under this Paragraph. Costs incurred by DTSC or EPA in performing the Work pursuant to this Paragraph shall be considered DTSC Future Response Costs or United States Future Response costs, as appropriate.

60. Notwithstanding any other provision of this Consent Decree, the United States and DTSC retain all authority and reserve all rights to take any and all response actions authorized by law.

XVIII. COVENANTS BY DEFENDANT

61. Covenant Not to Sue. Subject to the reservations in Paragraphs 62 and 63, Defendant hereby covenants not to sue and agrees not to assert any claims or causes of action against the United States or DTSC with respect to the Work, past response actions at the Site, and United States Past Response Costs, DTSC Past Response Costs and DTSC Future Response Costs or this Consent Decree, including, but not limited to:

a. any direct or indirect claim for reimbursement from the Hazardous Substance Superfund (established pursuant to the Internal Revenue Code, 26 U.S.C. § 9507) through CERCLA Sections 106(b)(2), 107, 111, 112, 113, Section 25370 - 25382 of the California Health & Safety Code, or any other provision of law;

b. any claims against the United States or against DTSC under CERCLA Sections 107 or 113 or under Section 25363 of the California Health & Safety Code, or any other provisions of law related to the Site,

c. any claims against the United States or DTSC arising out of response activities at the Site, including claims based on EPA's or DTSC's selection of response actions,

oversight of response activities or approval of plans for such activities,

d. any claims under the United States Constitution, the California Constitution, State law, the Tucker Act, 28 U.S.C. §1491, or common law, arising out of or relating to past or future access to, or the imposition of easements or other restrictions on, the use and enjoyment of property owned or controlled by the Defendant,

e. any claims for costs, fees or expenses incurred in this action, including claims arising under the Equal Access to Justice Act, as amended, 28 U.S.C. § 2412, or under any provision of State law.

62. The Defendant reserves, and this Consent Decree is without prejudice to, claims against the United States, subject to the provisions of Chapter 171 of Title 28 of the United States Code, for money damages for injury or loss of property or personal injury or death caused by the negligent or wrongful act or omission of any employee of the United States while acting within the scope of his office or employment under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred. However, any such claim shall not include a claim for any damages caused, in whole or in part, by the act or omission of any person, including any contractor, who is not a federal employee as that term is defined in 28 U.S.C. § 2671; nor shall any such claim include a claim based on EPA's selection of response actions, or the oversight or approval of the Defendant's plans or activities. The foregoing reservation applies only to claims which are brought pursuant to any statute other than CERCLA and for which the waiver of sovereign immunity is found in a statute other than CERCLA.

63. Notwithstanding Paragraph 61 of this Consent Decree, the Defendant does not waive any claims against DTSC that may arise subsequent to the entry of this Consent Decree as a result of acts or omissions of DTSC employees that recklessly or intentionally cause injury to the Defendant's employees or tangible property, or to the employees or tangible property of the

Defendant's agents while acting within the scope of his/her office or employment under circumstances where DTSC, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred. However, any such claim shall not include a claim for any damages caused, in whole or in part, by the act or omission of any person, including any contractor, who is not a state employee; nor shall any such claim include a claim based on DTSC's selection of response actions, or the oversight or approval of the Defendant's plans or activities.

64. Nothing in this Consent Decree shall be deemed to constitute preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

65. Defendant agrees not to assert any claims and to waive all claims or causes of action that it may have for all matters relating to the Site, including for contribution, against any person where the person's liability to Defendant with respect to the Site is based solely on having arranged for disposal or treatment, or for transport for disposal or treatment, of hazardous substances at the Site, or having accepted for transport for disposal or treatment of hazardous substances at the Site, if:

a. any materials contributed by such person to the Site constituting Municipal Solid Waste (MSW) or Municipal Sewage Sludge (MSS) did not exceed 0.2% of the total volume of waste at the Site; and

b. any materials contributed by such person to the Site containing hazardous substances, but not constituting MSW or MSS, did not exceed the greater of (i) 0.002% of the total volume of waste at the Site, or (ii) 110 gallons of liquid materials or 200 pounds of solid materials.

This waiver shall not apply to any claim or cause of action against any person meeting the above criteria if EPA and DTSC have determined that the materials contributed to the Site by such

person contributed or could contribute significantly to the costs of response at the Site. This waiver also shall not apply with respect to any defense, claim, or cause of action that the Defendant may have against any person if such person asserts a claim or cause of action relating to the Site against the Defendant.

XIX. EFFECT OF SETTLEMENT; CONTRIBUTION PROTECTION

66. Except as provided in Paragraph 65, nothing in this Consent Decree shall be construed to create any rights in, or grant any cause of action to, any person not a Party to this Consent Decree. The preceding sentence shall not be construed to waive or nullify any rights that any person not a signatory to this decree may have under applicable law. Except as provided in Paragraph 65, each of the Parties expressly reserves any and all rights (including, but not limited to, any right to contribution), defenses, claims, demands, and causes of action which each Party may have with respect to any matter, transaction, or occurrence relating in any way to the Site against any person not a Party hereto.

67. The Parties agree, and by entering this Consent Decree this Court finds, that the Defendant is entitled, as of the Effective Date, to protection from contribution actions or claims as provided by CERCLA Section 113(f)(2), 42 U.S.C. § 9613(f)(2), for matters addressed in this Consent Decree. For the purposes of this Consent Decree and Section 113(f)(2) of CERCLA, "matters addressed" shall mean the Work, United States Past Response Costs, DTSC Past Response Costs, and DTSC Future Response Costs.

68. The Defendant agrees that with respect to any suit or claim for contribution brought by it for matters related to this Consent Decree it will notify the United States and DTSC in writing no later than 60 days prior to the initiation of such suit or claim.

69. The Defendant also agrees that with respect to any suit or claim for contribution brought against it for matters related to this Consent Decree it will notify in writing the United States and DTSC within 10 days of service of the complaint on it. In addition, Defendant shall

notify the United States and DTSC within 10 days of service or receipt of any Motion for Summary Judgment and within 10 days of receipt of any order from a court setting a case for trial.

70. In any subsequent administrative or judicial proceeding initiated by the United States or DTSC for injunctive relief, recovery of response costs, or other appropriate relief relating to the Site, Defendant shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States or DTSC in the subsequent proceeding were or should have been brought in the instant case; provided, however, that nothing in this Paragraph affects the enforceability of the covenants not to sue set forth in Section XVII (Covenants Not to Sue by Plaintiffs).

XX. ACCESS TO INFORMATION

71. Defendant shall provide to EPA and DTSC, upon request, copies of all documents and information within its possession or control or that of its contractors or agents relating to activities at the Site or to the implementation of this Consent Decree, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Defendant shall also make available to EPA and DTSC, for purposes of investigation, information gathering, or testimony, its employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

72. Business Confidential and Privileged Documents.

a. Defendant may assert business confidentiality claims covering part or all of the documents or information submitted to Plaintiffs under this Consent Decree to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Documents or information determined to be confidential by EPA will be

afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies documents or information when they are submitted to EPA and DTSC, or if EPA has notified Defendant that the documents or information are not confidential under the standards of Section 104(e)(7) of CERCLA, the public may be given access to such documents or information without further notice to Defendant.

b. The Defendant may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the Defendant asserts such a privilege in lieu of providing documents, it shall provide the Plaintiffs with the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of the author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the contents of the document, record, or information: and (6) the privilege asserted by Defendant. However, no documents, reports or other information created or generated pursuant to the requirements of the Consent Decree shall be withheld on the grounds that they are privileged.

73. No claim of confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or information evidencing conditions at or around the Site.

XXI. RETENTION OF RECORDS

74. Defendant shall preserve and retain all records and documents now in its possession or control or which come into its possession or control that relate in any manner to the performance of the Work or liability of any person for response actions conducted and to be conducted at the Site for 10 years from the Effective Date of this Consent Decree or when the record or document comes into the possession of Defendant, whichever is later. Defendant shall

retain records pursuant to this Paragraph regardless of any corporate or governmental retention policy to the contrary. Defendant shall also instruct its contractors and agents to preserve all documents, records, and information of whatever kind, nature or description relating to the performance of the Work for 10 years.

75. At the conclusion of this document retention period, Defendant shall notify DTSC and EPA at least 90 days prior to the destruction of any such records or documents, and, upon request by DTSC or EPA, Defendant shall deliver any such records or documents to DTSC or EPA. The Defendant may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the Defendant asserts such a privilege, it shall provide the Plaintiffs with the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of the author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the subject of the document, record, or information; and (6) the privilege asserted by Defendant. However, no documents, reports or other information created or generated pursuant to the requirements of the Consent Decree shall be withheld on the grounds that they are privileged.

76. Defendant hereby certifies that, to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information relating to its potential liability regarding the Site since notification of potential liability by the United States or DTSC or the filing of suit against it regarding the Site and that it has fully complied with any and all EPA or DTSC requests for information pursuant to Section 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927.

XXII. NOTICES AND SUBMISSIONS

77. Whenever, under the terms of this Consent Decree, written notice is required to be

given or a report or other document is required to be sent by one Party to another, it shall be directed to the individuals at the addresses specified below, unless those individuals or their successors give notice of a change to the other Parties in writing. All notices and submissions shall be considered effective upon receipt, unless otherwise provided. Written notice as specified herein shall constitute complete satisfaction of any written notice requirement of the Consent Decree with respect to the United States, EPA, DTSC, and the Defendant, respectively.

As to the United States:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
Re: DJ # 90-11-3-836

and

Director, Superfund Division
United States Environmental Protection Agency
Region 9
75 Hawthorne St.
San Francisco, CA 94105

As to EPA:

Beatriz Bofill (SFD-7-2)
EPA Project Coordinator
United States Environmental Protection Agency
Region 9
75 Hawthorne St.
San Francisco, CA 94105

Regional Financial Management Officer
(PMD-5)
United States Environmental Protection Agency
Region 9
75 Hawthorne St.
San Francisco, CA 94105

As to the DTSC:

Barbara Cook
DTSC Project Coordinator
Department of Toxic Substances Control
Northern California – Coastal
Cleanup Operations Branch
700 Heinz Ave., Suite 200
Berkeley, CA 94710

As to the Defendant:

Leon Perrault
Defendant's Project Coordinator
Department of Health and Human Services
County of Del Norte
880 Northcrest Drive
Cresent City, CA 95531

and

Robert N. Black
County Counsel
County of Del Norte
981 H Street, Suite 220
Cresent City, CA 95531

XXIII. EFFECTIVE DATE

78. The effective date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court, except as otherwise provided herein.

XXIV. RETENTION OF JURISDICTION

79. This Court retains jurisdiction over both the subject matter of this Consent Decree and the Defendant for the duration of the performance of the terms and provisions of this Consent Decree for the purpose of enabling any of the Parties to apply to the Court at any time for such further order, direction, and relief as may be necessary or appropriate for the construction or modification of this Consent Decree, or to effectuate or enforce compliance with its terms, or to resolve disputes in accordance with Section XV (Dispute Resolution) hereof.

XXV. APPENDICES

80. The following appendices are attached to and incorporated into this Consent Decree:

"Appendix A" is the ROD Amendment #1.

"Appendix B" is the map of the Site.

"Appendix C" is the map identifying the approximate locations of existing groundwater monitoring wells.

"Appendix D" is the description of the real property subject to the restrictions as set forth in Paragraph 21.

"Appendix E" is the Covenant to Restrict Use of Property.

XXVI. COMMUNITY RELATIONS

81. Defendant shall cooperate with DTSC and EPA in providing information regarding the Work to the public. As requested by DTSC or EPA, Defendant shall participate in the preparation of such information for dissemination to the public and in public meetings which may be held or sponsored by DTSC or EPA to explain activities at or relating to the Site.

XXVII. MODIFICATION

82. No material modifications to the Groundwater Monitoring Plan or to this Consent Decree shall be made without written notification to and written approval of the United States, DTSC, Defendant, and the Court. Except as provided in Paragraph 13 ("Modification of the Approved Groundwater Monitoring Plan"), modifications to the Groundwater Monitoring Plan that do not materially alter that document may be effective on the date of written agreement between DTSC, after providing EPA with a reasonable opportunity to review and comment on the proposed modification, and the Defendant. Other non-material modifications to this Consent Decree may be made by the written agreement of the United States, DTSC and the Defendant, and shall be effective upon filing the modification with the Court.

83. Nothing in this Decree shall be deemed to alter the Court's power to enforce,

supervise or approve modifications to this Consent Decree.

XXVIII. LODGING AND OPPORTUNITY FOR PUBLIC COMMENT

84. This Consent Decree shall be lodged with the Court for a period of not less than thirty (30) days for public notice and comment in accordance with Section 122(d)(2) of CERCLA, 42 U.S.C. § 9622(d)(2), and 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations which indicate that the Consent Decree is inappropriate, improper, or inadequate. Defendant consents to the entry of this Consent Decree without further notice.

85. If for any reason the Court should decline to approve this Consent Decree in the form presented, this agreement is voidable at the sole discretion of any Party and the terms of the agreement may not be used as evidence in any litigation between the Parties.

XXIX. SIGNATORIES/SERVICE

86. The undersigned representative of the Defendant, the Branch Chief, Northern California Coastal Clean-Up Operations of DTSC, and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind such Party to this document.

87. The Defendant hereby agrees not to oppose entry of this Consent Decree by this Court or to challenge any provision of this Consent Decree unless the United States or DTSC has notified the Defendant in writing that it no longer supports entry of the Consent Decree.

88. The Defendant shall identify, on the attached signature page, the name, address and telephone number of an agent who is authorized to accept service of process by mail on behalf of Defendant with respect to all matters arising under or relating to this Consent Decree. Defendant hereby agrees to accept service in that manner and to waive the formal service

requirements set forth in Rule 4 of the Federal Rules of Civil Procedure and any applicable local rules of this Court, including, but not limited to, service of a summons.

XXX. FINAL JUDGMENT

89. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment between and among the United States and DTSC and the Defendant. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

SO ORDERED THIS 4th DAY OF March, 2002

CLAUDIA WILKEN

United States District Judge

FOR THE UNITED STATES OF AMERICA

Date

John C. Cruden
Acting Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice
Washington, D.C. 20530

10/16/01
Date

Cynthia S. Huber
Senior Attorney
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
(202) 514-5273

David W. Shapiro
United States Attorney
Northern District of California

Charles O'Connor
Assistant United States Attorney
Northern District of California
450 Golden Gate Avenue
San Francisco, CA 94102
(415)436-7200

Date

Keith Takata
Director, Superfund Division, Region 9
U.S. Environmental Protection Agency
75 Hawthorne St.
San Francisco, CA 94105

9/24/01
Date

Bethany Dreyfus
Assistant Regional Counsel
U.S. Environmental Protection Agency
Region 9
75 Hawthorne St.
San Francisco, CA 94105

FOR THE CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Date

Barbara Cook, Chief
Department of Toxic Substances Control
Northern California – Coastal
Cleanup Operations Branch
700 Heinz Ave., Suite 200
Berkeley, CA 94710

Date

Keith Takata
Director, Superfund Division, Region 9
U.S. Environmental Protection Agency
75 Hawthorne St.
San Francisco, CA 94105

Date

Bethany Dreyfus
Assistant Regional Counsel
U.S. Environmental Protection Agency
Region 9
75 Hawthorne St.
San Francisco, CA 94105

FOR THE CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

9/11/01
Date

Barbara Cook, Chief
Department of Toxic Substances Control
Northern California – Coastal
Cleanup Operations Branch
700 Heinz Ave., Suite 200
Berkeley, CA 94710

FOR THE COUNTY OF DEL NORTE

SEP 14 2001
Date

Martha McClure
Chair of the Board of Supervisors
County of Del Norte
981 H. Street, Suite 200
Cresent City, CA 95531

ATTEST

Karen L. Phillips, Clerk of the Board
of Supervisors, County of Del Norte, State
of California

ATTACHMENT A

AMENDMENT #1

TO THE

RECORD OF DECISION

FOR THE

DEL NORTE COUNTY PESTICIDE STORAGE AREA SUPERFUND SITE
DEL NORTE COUNTY, CA

U.S. Environmental Protection Agency
Region 9
San Francisco, CA

August, 2000

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Attachments

PART 1: THE DECLARATION

A. Site Name and Location

Del Norte County Pesticide Storage Superfund Site
Del Norte County, CA

B. Statement of Basis and Purpose

This decision document presents the U.S. Environmental Protection Agency's (EPA's) amended selected remedial actions for contaminated groundwater at the Del Norte County Pesticide Storage Site (Site) in Del Norte County, California, which were chosen in accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision is based on the administrative record for this site.

The State of California concurs with the selected amendments to the remedy.

C. Assessment of Site

Actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action selected in the Record of Decision (ROD), as modified by this ROD Amendment, may present an imminent and substantial endangerment to public health, welfare, or the environment.

D. Description of Selected Remedy

This ROD Amendment modifies the previously selected remedy for groundwater contaminated with 1,2-Dichloropropane (1,2-DCP) at the Del Norte County Pesticide Storage Site. All other contaminants identified in the original ROD have been remediated through excavation and disposal or are no longer present at levels above the cleanup goals. The revision affects both the cleanup standards and the cleanup technologies selected in the 1985 ROD. The 1985 ROD specified Pump and Treat (P&T) as the groundwater remedy to achieve groundwater restoration for drinking water use.

This ROD Amendment provides for 1) Containment of the groundwater plume through natural attenuation and continued monitoring through semiannual groundwater sampling of selected wells, 2) identification of a new applicable or relevant and appropriate requirement (ARAR) for 1,2-DCP (referred to as the MCL ARAR for 1,2-DCP), 3) a Technical Impracticability (TI) Waiver for the ARAR for 1,2-DCP and 4)

Institutional Controls to prevent exposure to contaminated groundwater. The major components of the revised groundwater remedy are as follows:

Containment and Semiannual Groundwater Monitoring

Destructive processes through biodegradation (i.e. natural attenuation) are occurring at a higher rate than plume migration. Without the processes taking place the plume would be expected to migrate downgradient at the same velocity as the regional groundwater, which it is not. It is expected that these processes will continue to stabilize the plume, and slowly shrink its size. It is not expected, however, that the cleanup goals will be reached solely through natural attenuation.

Semiannual Groundwater Monitoring will continue indefinitely under the direction of the State of California Department of Toxic Substances Control (DTSC). Monitoring will ensure that the plume behaves as expected. If after 2 years monitoring demonstrates that the plume remains stable and concentrations continue to decline, the option of an annual monitoring schedule may be considered. If the plume does not remain stable, an appropriate technology will be selected to actively remediate the plume.

Selection of a new ARAR

At the time of the 1985 ROD, an MCL for 1,2-DCP had not been set. A health based standard set at 10ug/L was chosen as the cleanup level. Pursuant to 40 CFR 300.430(f)(ii)(B)(2), components of a remedy that were not described in the original ROD must meet ARARs that exist at the time a ROD amendment is signed. Since the 1985 ROD, a MCL was established for 1,2-DCP and is being identified (but waived) as an ARAR for the site.

Technical Impracticability Waiver

After 7 years of groundwater remediation, monitoring, and evaluations, EPA has concluded that the P&T remedy employed at the Site and/or presently available technology will not restore the groundwater plume to meet groundwater cleanup standards for 1,2-DCP. The factual presentation providing the basis for a TI Waiver is documented in the "Justification for a Technical Impracticability Waiver (TI Waiver) at Del Norte County Pesticide Storage Superfund Site for the Record of Decision" (Attachment A). It is estimated that only 3.75 gallons of 1,2-DCP have been removed, and that 95% of this amount was removed in the first four years of P&T operation. Several augmentations were added to the system to try and accelerate remediation, including air sparging and added extraction wells. No appreciable change in contaminant removal was noted. The system was shut down to determine what effect this would have on contaminant removal and concentrations. After 6-month system shutdowns in 1995,1996,and 1997, no noticeable differences were noted. The system

has been off since October 1997 and semiannual monitoring reports show that contaminant concentrations continue to decline only slowly, at the same rate as when the treatment system was operating.

Institutional Controls

The following Institutional Controls, through a combination of agreements, land use covenants and/or local ordinances, will insure that the remaining contaminated groundwater will not be used: restriction of access to the Site; prohibition of disturbing existing wells; prohibition of using the contaminated groundwater; prohibition of well installation in the area of the contamination plume that could cause the plume to move; and prohibition of all residential use of the Site and industrial/commercial use of the Site that would interfere with existing wells. Institutional Controls should not be difficult to implement, monitor, or enforce because Del Norte County owns the Site. EPA and the State of California have reached an agreement in principle with Del Norte County to implement the above-described institutional controls.

E. Statutory Determinations

The selected remedy is protective of human health and the environment, complies with the requirements of CERCLA Section 121 for a waiver of Federal and State requirements that are legally applicable or relevant and appropriate, and is cost-effective. This remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable for this site. The revised groundwater remedies utilize containment through natural attenuation to reduce toxicity, mobility, or volume of contaminants. However, because treatment of 1,2-DCP was not found to be technically practicable, this remedy does not satisfy the statutory preference for treatment as a principal element of the remedy for groundwater.

Because a hazardous substance will remain on-site above health-based levels, the EPA will conduct a review pursuant to Section 121(c) of CERCLA, 42 U.S.C. 9621(c), to be completed in 2000, and every five years after for as long as contaminant levels remain above health-based levels to insure that the remedy continues to provide adequate protection of human health and the environment.

F. Authorizing Signature

8-29-00
Date

Keith Takata
Director, Superfund Division

PART 2: DECISION SUMMARY

A. Site Name, Location, and Description

The Del Norte County Pesticide Storage Area Site (Site), located approximately one mile northwest of Crescent City, California, consists of less than one acre of land contaminated with a variety of herbicides, pesticides, and other compounds. The Site is located in a rural area immediately south of McNamara Field, the airport that serves Del Norte County (See Figure 1). According to the California Department of Finance, approximately 28,100 people presently reside in Del Norte County.

As of January 1999, the population of Crescent City was estimated at 8,200. EPA estimates that 825 persons live within one mile of the Del Norte County Pesticide Storage Area Site.

The operation of the pesticide container storage area ceased in 1981. The Site is fenced, locked, and posted with a public notice stating that hazardous substances may be present. Del Norte County owns the Del Norte Site and the land surrounding it. The entire County-owned parcel (including the Site) covers an area of approximately 480 acres. The County property is bounded on the north by State-owned land, which is intended for use as a natural and recreational area; on the south by Washington Boulevard; on the east by Riverside Drive; and on the west by the Pacific Ocean.

B. Site History of Contamination and Selected Remedy

In December 1969, Del Norte County notified the North Coast Regional Water Quality Control Board (NCRWQCB) of the County's intent to operate a pesticide container storage area. The designated site, 200 feet long and 100 feet wide, was to be located at the southern border of the McNamara Field County Airport, 3/4 of a mile east of the Pacific Ocean. The County requested operating advice and approval from the NCRWQCB, and in January 1970, the NCRWQCB responded with suggested operating procedures and requested additional information about the Site. During 1970, the Site was designated by the NCRWQCB as a Class II-2 disposal site. It was to serve as a County-wide collection point for interim or emergency storage of pesticide containers generated by local agricultural and forestry-related industries. The NCRWQCB approved the Site for this use, provided that all containers were triple rinsed and punctured prior to arrival at the Site.

The pesticide container storage area operated from 1970-1981. In the fall of 1981, the NCRWQCB and California Department of Health Services (DHS) discovered soil and groundwater contamination. This discovery indicated that the pesticide containers had been rinsed on-site, and that the residues and rinseates were improperly disposed of in a bermed, unlined sump area. Preliminary investigations from 1981-1983, by NCRWQCB and DOHS, identified soil and groundwater contamination

with herbicides, pesticides and volatile and semivolatile compounds. Del Norte County's inability to fund further Site investigations initiated the process of listing the Site on the NPL in the fall of 1983.

The U.S. EPA completed Remedial Investigation/ Feasibility Study (RI/FS) activities in 1985. The results of those investigations indicated the contaminants of concern were 1,2-DCP and 2,4-dichlorophenoxyacetic acid (2,4-D). At that time, the contaminant plume was estimated to have extended approximately 170 feet to the southeast of the Site. Investigations also indicated that elevated levels of chromium were also present in soils at the site. The 1985 ROD selected excavation and off-site disposal of contaminated soils and extraction and treatment of the groundwater through pump and treat as the remedy.

In December 1987, EPA performed a Removal Action in which 290 cubic yards of contaminated soils were excavated and disposed of off-site at a licensed hazardous waste disposal facility. That action completed the source removal activities and soil remedy for the site. Continued groundwater monitoring between 1985 and 1987, during the pump and treatment system design phase, indicated the levels of 2,4-D and 1,2-DCP were decreasing significantly in the groundwater. Between 1985 and 1989 (after the source removal but before installation of the pump and treatment system) the levels of 2,4-D in monitoring wells at the Site decreased to less than 2 micrograms/liter (μg/l). The ROD established a 100μg/l cleanup level for 2,4-D, which was met prior to implementation of the treatment system. The levels of 1,2-DCP decreased from approximately 2000μg/l to 600μg/l in the same time period; although the concentrations remained above the 10 μg/l cleanup level. These reductions were likely a result of the source removal and biodegradation and/or volatilization of the contaminants in the groundwater.

Additional investigations to determine chromium levels in soils in the area were performed between 1985 and 1987. Those investigations indicated that the chromium levels were naturally high due to the presence of chromium ore in the bedrock source rock in the area. Based on these findings, an Explanation of Significant Differences (ESD) was prepared in September 1989. The ESD documented that the chromium levels in the soil did not require remediation through removal. The selected groundwater remedy of carbon filtration, coagulation and sand filtration was changed to aeration. Aeration had been considered in the original ROD alternatives but was not chosen due to its ineffective removal of 2,4-D and chromium. The cleanup level for 1,2-DCP was not changed by the ESD.

The pump and treatment system was installed in 1990 and began extracting groundwater from one extraction well at the rate of 15 gallons per minute (gpm). The treatment system operated continuously from April 1990 to December 1994. During that period it was observed that 1,2-DCP concentrations in the groundwater monitoring wells located within the plume had reached asymptotic levels; between approximately

40μg/l and 15μg/l. In 1994, EPA installed an air sparging system to determine if the injection of air into the aquifer would enhance contaminant removal. Additional sparge points were added in 1995. No discernable changes in the levels of 1,2-DCP in groundwater were noted.

In 1994, EPA also began a program of turning the groundwater treatment system off for extended periods of time to determine what effect it would have on contaminant concentrations. The system was turned off for approximately six months in 1995, and then restarted. It was turned off again for six months in 1996. No discernable differences were noted either time. The system has been off since October 1997 and semiannual monitoring reports show that contaminant concentrations continue to decline slowly, at the same rate as when the treatment system was operating.

C. Community Participation

The major community concerns, at the time the RI/FS was published, were contamination of the groundwater with chromium and the liability of the County for cleanup costs. Sampling revealed the form of chromium present was trivalent, and found to be a naturally occurring source of chromium. EPA and the State assumed the majority of the costs of remediation.

Due to low community interest no formal public meeting was held before the ROD was signed. Rather, two meetings were held with interested County, City and State officials and a local citizens action group (The Friends of Del Norte County). Five Fact Sheets have been prepared and distributed to the community: August 1984, July 1985, August 1987, August 1989, and December 1989. In addition, EPA has provided interviews and tours of the treatment system to the local press and interested community representatives. EPA also regularly informed local agency representatives and City Council members of groundwater treatment progress and analytical results.

On March 9, 2000, a community meeting was held to discuss the Proposed Plan for this ROD Amendment. A small group of local agriculturists and county employees attended. All concurred with the proposed amended remedy.

Documents contained in the administrative record have been made available at the Site repository located in the Del Norte County Library for community members to review and comment upon.

D. Basis for the ROD Amendment

The 1985 ROD specified P&T as the groundwater remedy to restore groundwater to drinking water use. This Amendment revises the selected remedy to containment of the groundwater plume through natural attenuation and continued monitoring through semiannual groundwater sampling of selected wells, selects a new

ARAR for 1,2-DCP, waives the MCL ARAR for 1,2-DCP, and imposes institutional controls to prevent exposure to contaminated groundwater.

The revision to the groundwater remedy is supported by the following information: completed remedial actions have performed appropriately and reasonable upgrades and modifications have been made to enhance contaminant mass removal. The groundwater treatment system has operated efficiently as designed. Based on the believed mechanics of the contaminant in aquifer soils and the rate of contaminant reduction, it is unknown when, or if, cleanup levels could be reached. The same rate of cleanup is expected if the remedial system is removed and levels are allowed to degrade naturally. However, natural attenuation is not a reasonable treatment remedy at the site because it is unknown whether natural processes will ever result in attaining cleanup levels over the entire plume. Further, the same rate of contaminant reduction is observed whether or not the pump and treatment system is in operation. Based on the mechanics of the source term in the groundwater (sorption onto soil clay and fines) no other remedies, either conventional or innovative, could be reasonably expected to remediate the contaminant to cleanup levels.

The 1985 ROD cleanup level of 10μg/l for 1,2-DCP (based on a health advisory) cannot be attained. In 1992, subsequent to the signing of the ROD, EPA promulgated a Maximum Contaminant Level (MCL) under the Safe Drinking Water Act of 5μg/l for 1,2-DCP, which was adopted by the State. Pursuant to 40 CFR 300.430(f)(ii)(B)(2), components of a remedy that were not described in the original ROD must meet ARARs that exist at the time a ROD amendment is signed. The MCL for 1,2-DCP, however, is more stringent than the cleanup level set in the 1985 ROD and therefore even less likely to be attained. For this reason, the MCL for 1,2-DCP will be waived based on the technical impracticability of attaining 5μg/l or less in the groundwater. All other constituents of concern have been remediated to below cleanup levels.

Monitoring of the groundwater conditions at the Site will continue indefinitely under the direction of the State of California DTSC. Semi-annual sampling of six monitoring wells will continue and access and use restrictions (institutional controls) will be imposed. Institutional controls will assure that contaminated groundwater will not be used and that no nearby use of the groundwater affects plume migration as long as contaminant levels remain above cleanup levels. Because Del Norte County owns all of the land surrounding the Site, institutional controls should be easily implemented.

The area over which the TI waiver will apply is the current areal and vertical extent of the contaminant plume for which the concentrations of 1,2-DCP exceed 5μg/l. That area is approximately 5000 square feet in size and is depicted in Figure 2. The plume extends to the depth of the uppermost aquifer (30 feet bgs). The resulting average plume thickness is approximately 20 to 27 feet.

E. Site Characteristics

As discussed, the plume area and contaminant concentrations have remained relatively stable within the last five years (see Table 1). The approximate length of the plume prior to implementation of the groundwater treatment system was 170 feet; it is now approximately 100 feet (see Figure 2). Contaminant concentrations in wells within the plume declined dramatically from 1990 to 1994 (see Table 1), but have not reduced appreciably since 1994.

Well to well comparisons of the four monitoring wells initially found to contain concentrations of 1,2-DCP (MW-25, MW-104, MW-105, and MW-108) have shown this asymptotic response. Concentrations of 1,2-DCP in well MW-104 have been relatively stable for four years but remain above the cleanup level. Well MW-105 has shown decreasing concentrations and will likely continue to do so. However, concentrations in MW-105 are expected to also stabilize above the cleanup level in the same manner as MW-104 due to their location near the center of the plume. Concentrations in wells MW-108 and MW-25 have dropped below the cleanup level, likely due to their location on the edge of the plume. Well MW-108, within the former sump area, has exhibited concentration reductions to non-detect levels. Downgradient wells, including the nearest to the original source area, MW-26, have not exhibited any detectable levels of any contaminant of concern since monitoring began in 1990.

The pesticide 1,2-DCP is a halogenated volatile organic compound with a high vapor pressure and a high Henry's Law constant. This means that the compound, once in water, has a high affinity to go to the vapor phase. However, the compound also has a relatively low Octanol/Water partitioning coefficient (K_{ow}). This results in the compound preferentially sticking to clay and other fine particles in the soil column and only slowly desorbing into the aqueous phase (groundwater). Given the relatively high clay and silt content of the soil at the Site, this process is the likely factor causing the relatively steady-state levels of 1,2-DCP in the groundwater.

Whether the source term of the 1,2-DCP is in a Non Aqueous Phase Liquid (NAPL) form is not known. The compound would not need to exist in the form of a NAPL in order to behave as such once sorbed onto clay and fines. High aqueous concentrations such as those discharged as rinseate into the sump would behave similarly. The location of the affected aquifer soils is likely in the immediate vicinity of the former release areas (i.e. sump). Once the higher concentrations of 1,2-DCP begin to diminish on the clay and fines, the contaminant levels will likely begin to drop relatively rapidly. The timeframe for this cannot be determined because the current mass within the soil and rate of desorption is unknown.

Given the high affinity of 1,2-DCP to go into the vapor phase, once the compound is desorbed into the groundwater, it likely volatilizes relatively quickly into the soil gas. This process can also be accelerated by the seasonal rise and fall of the water table. This exposes more of the soil to the atmosphere as the water table lowers.

The compound 1,2-DCP is also rated as a relatively biodegradable compound according to EPA technical documents (USEPA, Natural Attenuation Short Course Proceedings, 1997). Therefore, biodegradation could also be affecting contaminant concentrations. This process has not been specifically studied at this site. However, the specific documentation of this process is academic given the historic shrinkage and continued stability of the contaminant plume. Either or both of these processes (biodegradation and volatilization) are likely contributing to the stability of the contaminant plume. With the velocity of the groundwater at approximately 9.5 feet per year and the size of the plume shrinking, destructive processes are obviously occurring at a higher rate than plume migration and contaminant mass flux. Without natural attenuation, the plume would be expected to migrate downgradient at the same velocity as the regional groundwater (9.5 feet/year).

The trend data for well MW-105 support the concept that natural attenuation is successfully reducing contaminant concentrations and stabilizing the plume. However, natural attenuation will not likely allow the plume to reach the cleanup levels. This is supported by the behavior of contaminant concentrations in well MW-104 which have stabilized above the cleanup levels for the past four years. It is unknown when, or if, contaminant levels in these wells could reach cleanup levels.

F. Selected Remedy

The following section describes the modifications to the 1985 ROD.

Containment will be achieved through destructive biodegradation processes (i.e. natural attenuation) occurring at the Site. It is expected that these processes will continue to stabilize the plume, and slowly shrink its size. It is not expected, however, that the cleanup goals will be reached solely through natural attenuation. Contaminants will be monitored inside and down-gradient of the plume until the concentration of 1,2-DCP reaches drinking water standards. Monitoring and the selection of wells to be monitored will continue indefinitely under the direction of the State of California Department of Toxic Substances Control (DTSC). The following six wells will not be abandoned at the site, and will remain functional for monitoring or extraction purposes (See figure 2 for existing well locations): 101 & 201 were previous pumping wells, they will not be decommissioned in case of future need or use, 104 & 105 are the only wells that contain levels of 1,2-DCP above 5μg/l; monitoring of these wells will allow tracking of concentration decrease, 107 & 26 are two downgradient wells that will be used to determine if the plume is migrating. If 2 years of monitoring data demonstrates that the plume remains stable and concentrations continue to decline, the option of an annual, monitoring schedule may be considered. Wells to be monitored may be revised based upon the results of the semiannual monitoring plan. If the plume does not remain stable, an appropriate technology will be selected to actively remediate the plume.

(As described in Section H below, a waiver of the MCL ARAR for 1,2-DCP will be invoked for the plume beneath the Del Norte Storage Area Superfund site.)

Institutional Controls: The following Institutional Controls are selected to prevent exposure to the contaminated groundwater and to insure that the contaminated groundwater plume does not move into areas that are, or could be, used as sources of drinking water: 1) access to the Site will be restricted to protect existing monitoring wells and to prevent use of the contaminated groundwater; 2) disturbing existing wells will be prohibited; 3) use of the contaminated groundwater will be prohibited; 4) installation of wells that could cause the contaminated plume to move or flow different than it does currently will be prohibited; 5) use of the Site for residential purposes will be prohibited and use of the Site for industrial/commercial purposes that will interfere with containment of the plume or with existing wells will be prohibited. These Institutional Controls will be implemented through a settlement agreement with the current owner of the Site (Del Norte County), an enforceable land use covenant with the current or future owner of the Site (pursuant to Cal. Civil Code section 1471), and/or local ordinances. EPA and the State of California have reached an agreement in principle with Del Norte County to implement the above described Institutional Controls .

G. Remedial Action Objectives

The Remedial Action Objectives for groundwater remediation as described in the 1985 ROD were to:

- Prevent contamination of nearby wells
- Clean up contaminated groundwater to drinking water standards or background level

The remedy selected in this ROD Amendment will prevent contamination of nearby wells through containment of the plume. Semiannual groundwater monitoring will provide information on contaminant movement, and concentrations. Analysis of this information will allow the lead agency to determine if the plume continues to behave in the manner expected and in fact continues to be contained. There have been no significant changes in contaminant concentrations or movement for six years regardless of whether a treatment technology is being applied or not, and EPA has concluded this trend will continue. However, the second remedial action objective is unlikely to ever be met. The TI Waiver (see Attachment) states that the MCL ARAR for 1,2-DCP of 5μg/l cannot be achieved by treatment, therefore groundwater will not be remediated to drinking water standards. Although it is believed that natural destructive processes are slowly reducing the concentration of 1,2-DCP in the groundwater, it is unknown if drinking water standards or background levels can be achieved in this manner. The Remedial Action Objectives have been amended to the following:

- Contain the contaminated groundwater
- Prevent use of groundwater as drinking water for as long as contaminant concentration remains above drinking water levels

H. Nine-Criteria Analysis

EPA promulgated regulations in the NCP which establish a framework of nine evaluation criteria for selecting among remedial alternatives. These nine criteria are:

1. Overall Protection of Human Health and the Environment
2. Compliance with ARARs
3. Long-term Effectiveness
4. Reduction of Toxicity, Mobility, or Volume through Treatment
5. Short-term Effectiveness
6. Implementability
7. Cost
8. State Acceptance
9. Community Acceptance

Table 3 compares the original and amended remedies with regard to the nine criteria.

I. Statutory Determinations

Under its legal authorities, EPA's primary responsibility at Superfund sites is to undertake remedial actions that achieve adequate protection of human health and the environment. In addition, Section 121 of CERCLA establishes several other statutory requirements and preferences. These specify that, when complete, the selected remedial action must comply with applicable or relevant and appropriate environmental standards established under federal and State environmental laws unless a waiver is justified. The selected remedy must also be cost-effective and utilize permanent solutions and alternative treatment technologies to the maximum extent practicable. Finally, the statute includes a preference for remedies that employ treatment that permanently and significantly reduces the volume, toxicity, or mobility of hazardous wastes as their principal element. The following section discusses how the selected remedy addresses these statutory requirements and preferences.

Protection of Human Health and the Environment

The modifications of the 1985 ROD set forth in this ROD Amendment are still protective of human health because: 1) the source of contamination, and contaminated soils have been excavated and/or removed, 2) contamination of 1,2-DCP is contained based on groundwater monitoring data, 3) institutional controls will be implemented to prevent exposure to contaminated groundwater in the area of the plume, 4)

groundwater will be sampled and evaluated semiannually, and 5) remedy effectiveness will be reviewed at least every five years.

Because this remedy will result in contaminants remaining on-site above levels that allow for unlimited use and unrestricted exposure, a statutory Five-Year review will be conducted at least every five years until groundwater contamination has reached drinking water standards. Currently a Five-Year Review is in progress and is to be concluded in 2000.

Compliance with ARARs

This ROD amendment modifies the groundwater remedy selected in the 1985 ROD and documents a waiver of the MCL ARAR for 1,2-DCP for the groundwater plume beneath the Del Norte County Pesticide Storage Area. The EPA has waived the ARAR that applies to the plume because it is technically impracticable, from an engineering perspective, to meet the standards. See, CERCLA section 121(d)(4)(c), 42 U.S.C. Section 9621(d)(4)(c).

Remedial actions selected under CERCLA must comply with all ARARs under federal environmental laws or, where more stringent than the federal requirements, State or State subdivision environmental or facility siting laws. Where a State is delegated authority to enforce a federal statute, such as RCRA, the delegated portions of the statute are considered to be a Federal ARAR unless the State law is broader or more stringent than the federal law. Applicable or relevant and appropriate requirements are identified on a site-specific basis from information about site-specific chemicals, specific actions that are being considered, and specific features of the site location. There are three categories of ARARs: (1) chemical-specific requirements; (2) action-specific requirements; and (3) location-specific requirements. Where no ARARs exist for a given chemical, action or location, EPA may consider non-promulgated federal or State advisories and guidance as To Be Considered criteria (TBC). Although consideration of a TBC is not required, if standards are selected based on TBC, those standards are legally enforceable.

Chemical-specific ARARs are risk-based cleanup standards or methodologies which, when applied to site-specific conditions, result in the development of cleanup standards for Contaminants of Concern (COC). Location-specific ARARs are restrictions placed on concentrations of hazardous substances or the conduct of activities because of the special locations, which have important geographical, biological or cultural features. Examples of special locations include wetlands, flood plains, sensitive ecosystems and seismic areas. Action-specific ARARs are technology-based or activity-based requirements or limitations on actions to be taken to handle hazardous wastes. They are triggered by the particular remedial activities selected to accomplish a remedy.

The ARARs adopted in the 1985 ROD were "frozen" as of the date that EPA signed the ROD. No chemical-specific ARAR for 1,2-DCP was identified in the 1985 ROD. Because in this ROD Amendment EPA is selecting a component of the remedy not described in the 1985 ROD, pursuant to 40 CFR 300.430(f)(ii)(B)(2), EPA is identifying an additional ARAR for the remedy at this Site: the MCL for 1,2-DCP 5 ug/l. (EPA is also waiving the ARAR for the new remedy as discussed below.)

In this ROD Amendment, EPA concludes that it is technically impracticable from an engineering perspective to achieve the MCL for 1,2-DCP for contaminated groundwater beneath the Site. Pursuant to 40 CFR 300.430(f)(ii)(c)(3), the EPA is waiving the MCL ARAR for 1,2-DCP because contaminant and hydrogeologic conditions inhibit restoration. The residual 1,2-DCP in the aquifer is behaving as a NAPL, and makes groundwater restoration of the plume technically impracticable given current technologies. The factual basis for the TI Waiver is set forth in more detail in the TI Evaluation, Attachment A.

Cost-Effectiveness

Cost-effectiveness is determined by evaluation of three of the balancing criteria (long-term effectiveness and permanence; reduction of toxicity, mobility or volume through treatment; and short-term effectiveness). Overall effectiveness is then compared to cost to ensure that the remedy is cost-effective.

The remedy proposed in this ROD Amendment does not alter the long-term effectiveness of the original remedy. The P&T technology that was being used was not effective at restoring the aquifer to drinking water levels. However, continued monitoring of plume concentration, size, and movement will provide assurance that human health and the environment are protected for as long as contamination remains above the cleanup level. Though not through treatment, this Amendment does allow for reduction of toxicity, volume and mobility of the contaminant through natural attenuation. Evidence of this has already been noted, and it is believed that it will continue, but not at a rate that would reach remediation goals within a reasonable time frame. No short-term impacts are expected due to the implementation of the alternative remedy. The yearly cost of the original remedy is over 3.5 times the yearly cost of the amended remedy.

Utilization of Permanent Solutions and Alternative Treatment Technologies or Resource Recovery Technologies to the Maximum Extent Practicable

The EPA has determined that the remedy described in this ROD Amendment represents the maximum extent to which permanent solutions and treatment technologies can be used in a cost-effective manner for groundwater at the Del Norte Site.

Preference for Treatment as a Principal Element

As previously stated, the available treatment technologies are not capable of removing and treating all of the 1,2-DCP necessary to attain ARARs/groundwater restoration of the contaminant plume. EPA expects that monitoring inside and downgradient of the plume represents adequate control for migration and will allow continued tracking of reductions in contaminant concentrations. The selected remedy uses containment, monitoring and institutional controls rather than treatment to address the threats posed by the contamination. The available treatment technologies will not achieve the restoration of drinking water standards.

J. Documentation of Significant Changes from the Proposed Plan

No significant changes have been made from the Proposed Plan.

PART 3: RESPONSIVENESS SUMMARY

One verbal comment was given by Glenn Anderson (an employee of the County Department of Agriculture) at the Community Meeting on March 9, 2000.

Glenn Anderson: "I think this amended plan should have been adopted some five years or more ago instead of building up the cost to the County and everyone involved and (sic) mediating this situation. The health risk of very small amounts, parts per billion. A few years ago it couldn't even be determined that you still measure parts per billion. And new techniques came along where you can keep getting it lower and lower. And I know they were getting close to the ten part per billion safety level on a lot of the wells, quite a few years ago. And all of a sudden it got dropped to five. Then the thing kept on going. But I think this is a good idea to stop the pumping and get a closure on it.

Response to Comment: Mr. Anderson, thank you for your comment. We appreciate your concurrence with our remedy. Your comment that EPA should have amended the plan five years ago is understandable. EPA's statutory preference for cleaning up a Superfund site is to reduce the volume, mobility and toxicity of the chemicals of concern at a site through treatment. During the past five years, EPA has tried to achieve this goal by studying various technologies at the site (i.e., air stripping, air sparging, pulsing of the system) to see if the goal of cleanup was technically practicable. Based on these treatability studies, we are now able to conclude that we do not currently have the technology to achieve the cleanup levels at the Del Norte Site. Therefore, we are able to propose this amended remedy which achieves protectiveness of public health and the environment through other means (i.e., containment, monitoring and institutional controls.).

In a letter dated April 17,2000, the State of California through the California Department of Toxic Substances Control (DTSC) concurred with the proposed remedy.

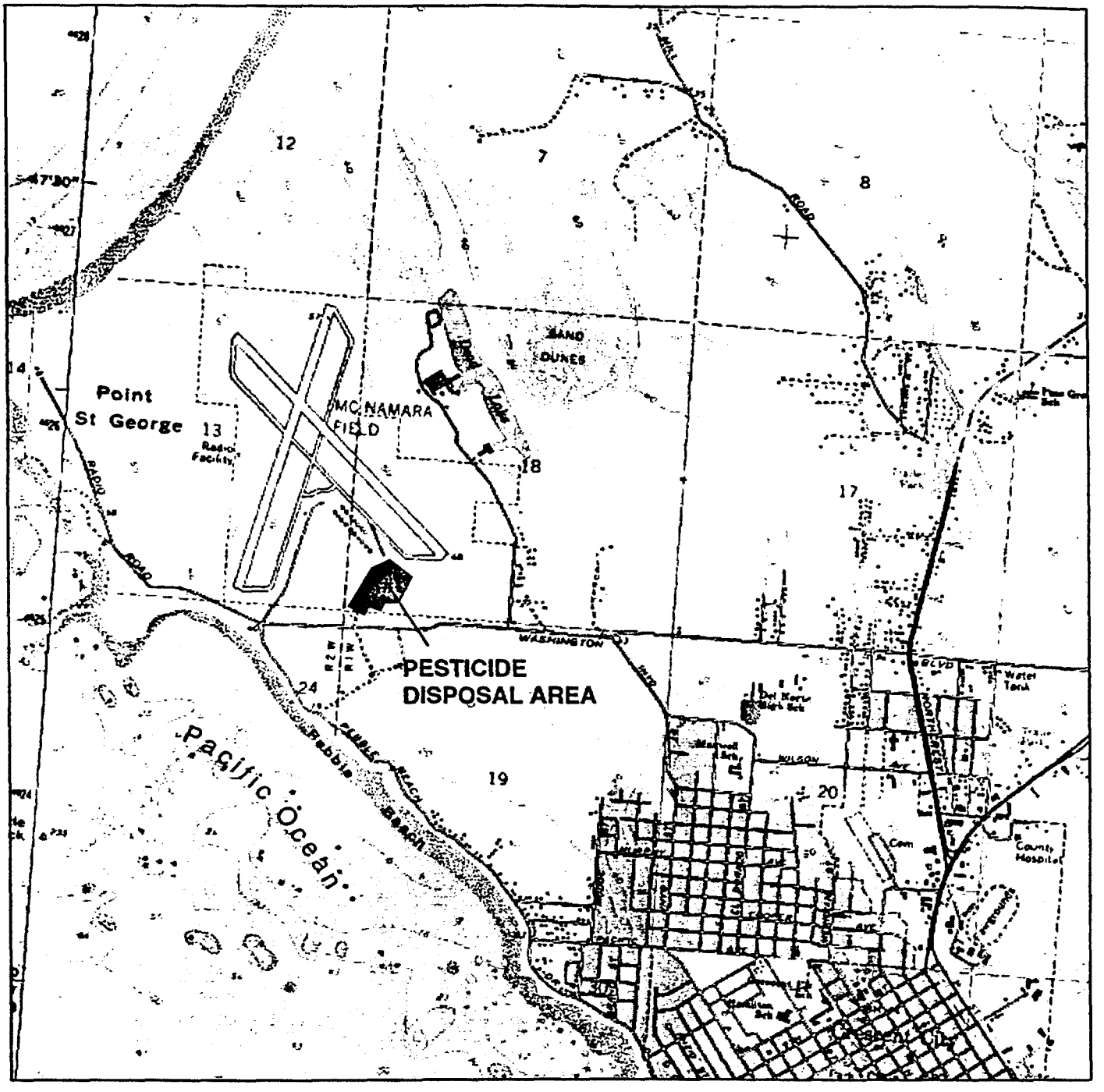
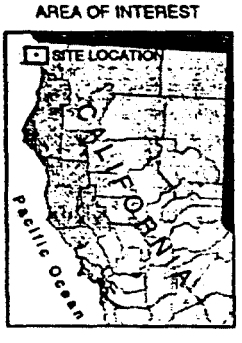
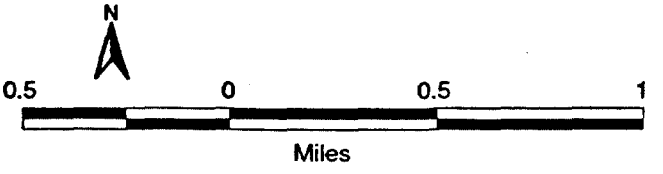


Figure 1: Site map





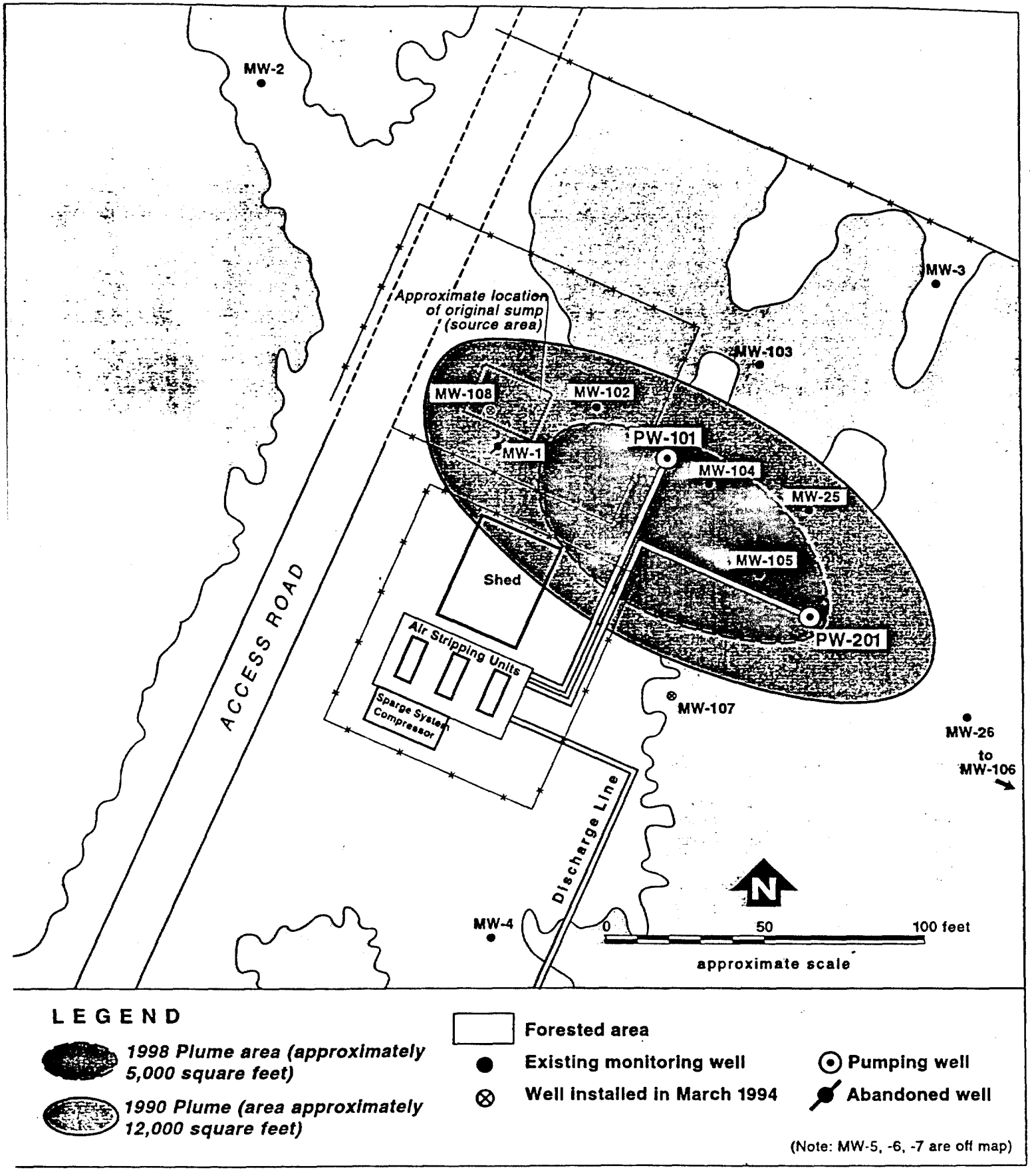


Figure 2: Areal Extent of 1,2 DCP Concentrations > 5 ppb

Table 1: 1,2-DCP Concentrations

TABLE 1 SELECTED GROUNDWATER MONITORING WELL SAMPLE RESULTS Del Norte County Pesticides Storage Area Site					
MW-104		MW-105		MW-25	
Sampling Date	1,2-DCP (ug/L)	Sampling Date	1,2-DCP (ug/L)	Sampling Date	1,2-DCP (ug/L)
3/24/90	250	3/24/90	220	3/24/90	25
		3/24/90	250		
3/29/90	230				
3/29/90	240				
4/21/90	310	4/21/90	90		
		4/22/90	400		
4/23/90	220	4/23/90	180		
4/23/90	280	4/23/90	230		
4/26/90	430	4/26/90	460		
5/8/90	260	5/8/90	410		
5/22/90	240	5/22/90	330		
		5/22/90	450	5/22/90	23
6/21/90	130	6/21/90	300		
7/26/90	370	7/26/90	260	7/26/90	18
12/6/90	100	12/6/90	73	12/6/90	19
12/6/90	110	12/6/90	73		
		12/6/90	90		
4/18/91	130	4/18/91	91	4/18/91	20
8/28/91	52	8/28/91	57	8/28/91	23
		8/28/91	57		
11/7/91	89	11/7/91	63	11/7/91	23
2/26/92	96	2/26/92	30	2/26/92	11
2/26/92	99				
12/10/92	77	12/10/92	22	12/10/92	11
8/3/93	87	8/3/93	34	8/3/93	13.8
8/3/93	91				
11/17/93	92	11/17/93	72	11/17/93	18
		11/17/93	77		
2/28/94	43	2/28/94	21	2/28/94	8
6/17/94	130	6/17/94	23	6/17/94	6.3
12/14/94	37	12/14/94	12	12/14/94	3.8

Table 1 Continued

MW-104		MW-105		MW-25	
Sampling Date	1,2-DCP (ug/L)	Sampling Date	1,2-DCP (ug/L)	Sampling Date	1,2-DCP (ug/L)
12/14/94	39				
7/26/95	31	7/26/95	17	7/26/95	5.4
		7/26/95	21		
10/25/95	13	10/25/95	73	10/25/95	7
2/7/96	22	2/7/96	48	2/7/96	3.8
		2/7/96	44		
5/14/96	18	5/14/96	48	5/14/96	11
8/21/96	19	8/21/96	39	8/21/96	14
8/21/96	19				
11/13/96	8.4	11/13/96	40	11/14/96	6.9
		11/13/96	29		
5/13/97	19	5/13/97	35	5/13/97	4.5
5/13/97	18				
10/7/97	20	10/7/97	38	10/7/97	10
		10/7/97	37		
6/11/98	13	6/11/98	26	6/11/98	3.8
12/9/98	14	12/9/98	23	6/11/98	3.2
		12/9/98	23	12/9/98	3.7
11/1999	8.2	11/1999	23	11/1999	1.9

= No Sample

Table 2: Applicable or Relevant and Appropriate Requirements for Groundwater
Del Norte County Pesticide Storage Area ROD Amendment

Source	Standard, Requirement, Criterion, or Limitation	Applicable or Relevant and Appropriate	ARAR or Performance Standard Applicability
Porter-Cologne Water Quality Control Act (California Water Code Sections 13140-13147, 13172, 13260, 13262, 13267, 13304.)	Title 27, CCR, Section 20410, Title 23, CCR, Section 2550.6	Applicable	Applies to groundwater remediation and monitoring of sites. Groundwater will be remediated and monitored according to Title 27/Title 23 regulations.
Title 22 CCR Section 64444	5μg/L	Relevant and Appropriate	State MCL for 1,2-Dichloropropane
Safe Drinking Water Act (40 U.S.C. 300et seq.)	National Primary Drinking Water Regulations (40 CFR Part 141)	Relevant and Appropriate	chemical-specific drinking water standards MCLs have been promulgated under the Safe Drinking Water Act.

Table 3: Nine Criteria Analysis

Comparative Analysis

Evaluation Criteria	Original Remedy	Proposed Alternate Remedy
Overall Protectiveness of Human Health and the Environment	The original remedy if successful would be more protective than the alternate remedy because the treatment technology was expected to restore the groundwater to drinking water quality. Seven years of treating the groundwater showed that the remedy could not reach the cleanup level.	The alternate remedy provides adequate protection because it will control the risk from the contaminated groundwater through containment of the groundwater plume from natural processes. Land use restrictions will prevent exposure to contaminated groundwater.
Compliance with State and Federal Requirements	The original remedy did not meet the cleanup level which was based on a health advisory for 1,2-DCP in drinking water.	The alternate remedy will not meet the ARAR for the MCL for 1,2 DCP in drinking water. There is no technology currently available capable of further significant reduction of the contaminated groundwater beyond the level already achieved. For this reason, the MCL for 1,2 DCP will be waived because it is technically impractical to meet this standard.
Long-term Effectiveness	The remedy was expected to achieve the cleanup level permanently. Evidence has shown that the remedy is not capable of restoring the groundwater to drinking water quality.	Some removal of 1,2 DCP is expected to occur through natural processes but not at a rate that will restore the groundwater to drinking water quality. The contaminated groundwater will be monitored to confirm that the contamination is not increasing or migrating off-site. Because waste will remain on the site above health-based levels a review to assess the contamination will be done

Table 3: Nine Criteria Analysis

		within five years.
Implementability	The remedy did not have implementation problems. The treatment equipment was readily available and the treatment technology had been used successfully to restore contaminated groundwater to drinking water quality.	No construction or special material are required. Since the site is owned by Del Norte County land use restrictions are expected to be easy to implement.
Short-term Effectiveness	Construction period was brief with no release of contaminants or exposure during implement-ation.	No construction is required and no impact over the short term is expected to the areas surrounding the site.
Reduction of Toxicity, Mobility or Volume by Treatment	The remedy reduced the conen-tration of the groundwater contamination. The pumping and treating system was effective in containing the remedy and reduced the mobility of the contaminated groundwater plume. The volume of the contaminated groundwater was reduced by over 50%.	The alternative remedy does not include treatment. However, natural processes will continue to occur which reduce the mobility by containing the groundwater contamination and may also reduce the volume of contaminated groundwater. At this time it is not possible to estimate whether or when the reduction will reach safe drinking water quality. No treatment of the groundwater will be employed since existing technology is not capable of meeting the cleanup level.
Present Worth Cost	$4.2 million	Estimated 5 year cost $35,426 10 year cost $60,684
State Acceptance	The State of California concurred on the remedy.	The State of California (DTSC) concurs on the proposed plan including the technical impracticability waiver.
Community Acceptance	The remedy was accepted by the community.	The remedy was accepted by the community.

Attachment A

Justification for a Technical Impracticability Waiver at Del Norte County Pesticide Storage Superfund Site for the Record of Decision

1.0 Introduction

This document presents the background, documentation, and justification for a Technical Impracticability (TI) waiver for the groundwater plume at the Del Norte County Pesticide Storage Superfund Site in Del Norte County, California (Figure 1). The current groundwater contamination plume at the site consists of 1,2-Dichloropropane (1,2-DCP) concentrations up to 38 micrograms per liter (μg/l). The cleanup level stated in the 1985 Record of Decision (ROD) for 1,2-DCP is 10 μg/l and is based on a health advisory. The estimated area of the plume currently above the cleanup level is approximately 5,000 square feet. The original size of the plume was approximately 12,000 square feet in 1990.

Source removal activities were performed at the site in August 1987. Those activities included removal of 290 cubic yards of contaminated soils. The United States Environmental Protection Agency (EPA) has operated a groundwater pump and treatment system at the site since April 1990. The groundwater treatment system consists of two extraction wells feeding an air stripping unit. Once treated, the groundwater is discharged to the local Public Owned Treatment Works. Following initial startup of the treatment system, dramatic reductions of 1,2-DCP were observed in groundwater concentrations. However, these concentrations reached asymptotic levels within the first four years of operations. Subsequent modification to the system through air sparging resulted in only slight reductions in the concentrations. The system was also shut down during several periods over the last four years for comparison of contaminant concentrations and plume behavior; no significant changes were noted. At the current rate of contaminant concentration reduction, it is not possible to determine when, or if, cleanup levels will be reached.

Since source removal and active remediation began, the portion of the plume with 1,2-DCP concentrations greater than 10 μg/l has been reduced by approximately 50%. However, since 1997, little or no reduction has been noticed. It is believed that the 1,2-DCP is being slowly desorbed from clays and silts in the soil to the groundwater. The 1,2-DCP then either volatilizes to the soil gas or biodegrades at a rate slightly greater than or equal to the rate of desorption (i.e. Natural Attenuation). The rate of natural attenuation has been sufficient to contain and shrink the plume, but it is not likely that natural attenuation will be sufficient to allow the plume to reach cleanup levels.

An evaluation of the site conditions, the treatment system, and treatment options as discussed in this document has led to the conclusion that cleanup levels of 1,2-DCP cannot be reached through engineering means or through natural attenuation. Therefore, the ROD will be amended to reflect the fact that the cleanup level for 1,2-

DCP of 10 μg/l, established in the 1985 ROD, cannot be attained and that an alternate remedy will be selected. The Maximum Contaminant Level (MCL) for 1,2-DCP set at 5 μg/l was promulgated subsequent to the signed ROD. The amendment process requires a re-examination of Applicable or Relevant and Appropriate Requirements (ARARs) that may relate to the remedy. The re-examination of ARARs indicates that the MCL for 1,2-DCP is an ARAR for the alternate remedy. Since the MCL for 1,2-DCP is more stringent than the cleanup level specified in the ROD, the MCL will be waived based on technical impracticability. It is the intent of EPA through an existing contractual agreement with the State of California's Department of Toxic Substances Control (DTSC) and/or through an enforcement agreement with Del Norte County to have groundwater monitoring continue and that institutional controls to control site use be established and enforced. A waiver of the MCL for 1,2-DCP will allow for delisting of the site from the NPL while achieving our remedial action objectives.

2.0 Background

The Del Norte County Pesticide Storage Site is located approximately one mile north of Crescent City, California and approximately ½ mile from the Pacific Ocean (Figure 1). The site is located on an undeveloped area of land controlled by the Del Norte County Agricultural Commission near the south end of the county airport. The county operated the site as a county-wide collection point and storage area for pesticide containers from 1970 to 1981. As part of site operations, containers were rinsed and the rinsate disposed in a bermed, unlined sump area. Soil and groundwater contamination were discovered in 1981 by the State of California Regional Water Quality Control Board.

Private domestic water supply wells in the area made contamination of the local groundwater a concern to the regulatory agencies. The nearest private water supply wells are approximately 1/4 mile east of the site. Figure 2 shows the locations of the nearest off-site private domestic wells, east of the site.

State and local cleanup efforts were performed in 1982 which included removal of the stored containers. After State and local funds were expended in initial cleanup efforts at the site, the site was included on the NPL in 1983. The EPA has been the lead agency for the site since its listing on the NPL.

Remedial Investigation/ Feasibility Study (RI/FS) activities were completed by the U.S. EPA in 1985. The results of those investigations indicated the contaminants of concern were 1,2-DCP and 2,4-dichlorophenoxyacetic acid (2,4-D). At that time, the contaminant plume was estimated to have extended approximately 170 feet to the southeast of the site (Figure 3). Investigations also indicated that elevated levels of chromium were also present in soils at the site. The 1985 ROD selected excavation and off-site disposal of contaminated soils and extraction and treatment of the groundwater as the remedy.

In December 1987, EPA performed a Removal Action in which 290 cubic yards of

contaminated soils were excavated and disposed of off-site at a licensed hazardous waste disposal facility. That action completed the source removal activities and soil remedy for the site. Continued groundwater monitoring between 1985 and 1987, during the pump and treatment system design phase, indicated the levels of 2,4-D and 1,2-DCP were decreasing significantly in the groundwater. Between 1985 and 1989 (after the source removal but before installation of the pump and treatment system) the levels of 2,4-D in monitoring wells at the site decreased to less than 2 μg/l. The ROD established a 100 μg/l cleanup level for 2,4-D, which was met prior to implementation of the treatment system. The levels of 1,2-DCP decreased from approximately 2000 μg/l to 600 μg/l in the same time period; although the concentrations remained above the 10 μg/l cleanup level. These reductions were likely a result of the source removal and biodegradation and/or volatilization of the contaminants in the groundwater.

Additional investigations into chromium levels in soils in the area were performed between 1985 and 1987. Those investigations indicated that the chromium levels were naturally high due to the presence of chromium ore in the bedrock source rock in the area. Based on these findings, an Explanation of Significant Differences (ESD) was prepared in September 1989. The ESD documented that the chromium levels in the soil did not require remediation through removal. The ESD also changed the groundwater treatment system to a less complex air-stripping technology since 2,4-D and chromium no longer required groundwater remediation. The cleanup level for 1,2-DCP was not changed by the ESD.

The pump and treatment system was installed in 1990 and began extracting groundwater from one extraction well at the rate of 15 gallons per minute (gpm). The treatment system operated continuously from April 1990 to December 1994. During that period it was observed that 1,2-DCP concentrations in the groundwater monitoring wells located within the plume had reached asymptotic levels; between approximately 40 μg/l and 15 μg/l. In 1994, EPA installed an air sparging system to determine if the injection of air into the aquifer would enhance contaminant removal. Additional sparge points were added in 1995. No discernable changes in the levels of 1,2-DCP in groundwater were noted, however.

In 1994, EPA also began a program of turning the groundwater treatment system off for extended periods of time to determine what effect it would have on contaminant concentrations. The system was turned off for approximately six months in 1995, then restarted. It was turned off again for six months in 1996. No discernable differences were noted either time. The system has been off since October 1997 and semiannual monitoring reports show that contaminant concentrations continue to decline only slowly; at the same rate as when the treatment system was operating. The approximate extent of the current 1,2-DCP plume is presented in Figure 4.

3.0 Geologic and Hydrogeologic Setting

Del Norte County is the northern and westernmost county in California. The Del Norte site lies on a marine terrace shelf on the edge of the Pacific ocean (Figure 1). The marine terrace represents an approximately 1 ½ mile wide, relatively flat zone parallel to the Pacific coastline that once lay below sea level near shore. The terrace is bound to the east by the Coast Range mountains. The site, and the aquifer beneath, lie in the Quaternary aged Battery Formation. The Battery Formation consists of moderately well sorted fine sands, silts, and clays with generally moderate groundwater permeability (Figure 5). The presence of clays and fines likely contributes to the continued presence of 1,2-DCP being released into the groundwater.

The ROD states that the water within the Battery Formation is considered a Class II groundwater under EPA's Groundwater Protection Strategy. A Class II groundwater classification indicates that the groundwater is a current or potential source of drinking water or other beneficial uses. Groundwater in the area is being used for agricultural and domestic purposes. Water supply wells in the Battery Formation are capable of producing reasonable quantities of water of acceptable quality for domestic purposes. The nearest domestic water supply wells are located approximately 1/4 mile east of the site (Figure 2). No known agricultural wells are in the immediate vicinity of the site.

The elevation of the site is approximately 50 feet. Groundwater in the area is relatively shallow, ranging between 3 and 10 feet below ground surface seasonally. The thickness of the uppermost aquifer (Battery Formation) is approximately 30 feet in the vicinity of the site. Groundwater flow is consistently to the southeast in the immediate vicinity of both the site and the contaminant plume (Figure 2). Within a mile downgradient of the site, the gradient changes to the south, towards the ocean. The gradient is moderately steep, dropping approximately 10 feet in 1000 linear feet. Hydraulic conductivities of the aquifer have been calculated to be approximately 10^{-3} cm/sec with an average linear pore fluid velocity of approximately 9.5 feet/year. The recharge area for the aquifer is likely the Coast Range mountains to the east as well as direct percolation through on-site soils. A small lake is also present to the east of the site, Dead Lake (Figure 1), and likely affects local groundwater recharge.

The average annual rainfall in the area is approximately 79 inches. Surface water drainage in the vicinity of the site is through a series of drainage channels and ephemeral streams which drain to the southeast and south to the ocean. Most channels are dry during the summer months.

4.0 Summary of Source Control and Remedial Measures

Remedial measures implemented at the site since 1982 included removal of approximately 1590 drums and containers from the storage yard by the State of California. Subsequent soil removal measures included excavation and off-site disposal of approximately 290 cubic yards (cy) of contaminated soil by the U.S. EPA in 1987. The excavation of the 290 cy of soil from the former sump area represented a

near-complete source removal at the site. The location of the former source area (the sump) is shown in Figure 3. Confirmation samples of the surface soil (the source of the contamination) collected following the excavation indicated that concentrations were below any action levels or levels which could continue to contribute to groundwater contamination. The success of this source removal was evidenced by the significant decline in groundwater concentrations of all constituents of concern including 2,4-D and 1,2-DCP. Figure 6 presents the concentrations of 1,2-DCP in the wells within the plume from 1990 to 1994.

Installation of the groundwater pump and treatment system in 1990 was the beginning of active mass removal from the groundwater. Locations of the monitoring wells and the extraction wells (PW-101 and PW-201) are shown on Figure 3. The groundwater treatment system operated for nearly seven years. The system was operated at a continuous pumping rate of 15 gallons per minute. Since its installation, and accounting for shut-down periods, the system has operated a total of 79 months. That represents approximately 51 million gallons of treated groundwater. Initial estimates presented in RI investigation reports (SCS, 1988) anticipated that the groundwater treatment system would need to extract and treat approximately 10 pore volumes from the plume, or 7.5 million gallons, before reaching the cleanup level. This was based on an estimated plume pore volume of 750,000 gallons. The system has now processed 68 pore volumes of the plume and cleanup levels have still not been reached.

The estimated volume of 1,2-DCP removed by the system has been calculated to be approximately 3.75 gallons (14.2 liters or 16.4 kilograms). Approximately 95% of that mass was removed within the first four years of operation (1990 to 1994). Estimates of the total contaminant volume released and the total volume remaining in the environment are not determinable because of several unknown factors. These factors include the unknown volume of contaminant mass that has been naturally attenuated (volatilized or biodegraded), and the unknown amount of contaminant mass still remaining within the soil and clays at the source area.

Several augmentations to the system have been made in order to increase mass removal and attempt to reach cleanup levels. These augmentations included addition of an air sparging system to the plume area and the addition of a second extraction well (PW-201) to determine if additional contaminants would desorb in to the aquifer. Neither resulted in any appreciable change in mass removal or contaminant concentrations in the groundwater. Figure 7 presents the 1,2-DCP concentrations for wells within the plume since 1994 when air sparging began.

The air sparging system consisted of injecting air under pressure into the aquifer. The air was injected within the plume through a series of injection points. The injection points consisted of ½-inch diameter PVC tubes placed to the bottom of the aquifer at approximately 30 feet below grade. The tubes were then plumbed to an air compressor which forced air through the tubes to the bottom of the aquifer. The air would then bubble to the surface through the entire aquifer thickness. The initial 10 sparging points

were installed in March 1994 and operated for one year. Once sparging began, one monitoring well, MW-105 saw a dramatic decrease in 1,2-DCP concentrations within the first six months, but levels returned to near normal within the following six months (Figure 7). When no appreciable differences were noted in contaminant concentrations from the remaining wells, 15 additional sparging points were installed in July 1995. Figure 8 shows the locations of the initial 10 air sparging points and additional 15 points installed in 1995. No significant changes were noted in contaminant concentrations after an additional year, and the air sparging system was shut off in November 1996. The remainder of the groundwater treatment system continued to operate.

The groundwater treatment system operated continuously from April 1990 to December 1994. System shutdowns were then implemented to determine what effect it would have on mass removal and contaminant concentrations. The system was turned off and then on again twice between December 1994 and October 1997. The system was first turned off for approximately six months in 1995, then restarted. It was then turned off again for six months in 1996. The operation cycles are presented in comparison to 1,2-DCP concentrations on Figure 7. No noticeable differences in contaminant concentrations were noted during this time period. The system was shut down for the last time in October 1997 and has not been turned on since, pending results of semiannual sampling of the monitoring wells.

5.0 Contaminant Fate and Transport

As discussed, the plume area and contaminant concentrations have remained relatively stable within the last five years (Figure 7). The approximate length of the plume prior to implementation of the groundwater treatment system was 170 feet; it is now approximately 100 feet (figures 3 and 4, respectively). Contaminant concentrations in wells within the plume declined dramatically from 1990 to 1994 (Figure 6), but have not reduced appreciably since 1994.

Well to well comparisons of the four monitoring wells initially found to contain concentrations of 1,2-DCP (MW-25, MW-104, MW-105, and MW-108) have shown this asymptotic response. Concentrations of 1,2-DCP in well MW-104 have been relatively stable for four years but remain above the cleanup level. Well MW-105 has shown decreasing concentrations and will likely continue to do so. However, concentrations in MW-105 are expected to also stabilize above the cleanup level in the same manner as MW-104 due to their location near the center of the plume. Concentrations in wells MW-108 and MW-25 have dropped below the cleanup level; likely due to their location on the edge of the plume. Well MW-108, within the former sump area, has exhibited concentration reductions to non-detect levels. Downgradient wells, including the nearest to the original source area, MW-26, have not exhibited any detectable levels of any contaminant of concern since monitoring began in 1990.

The pesticide 1,2-DCP is a halogenated volatile organic compound with a high vapor pressure and a high Henry's Law constant. This means that the compound, once in

water, has a high affinity to go to the vapor phase. However, the compound also has a relatively low K_{ow} (Octanol/Water partitioning coefficient). This results in the compound preferentially sticking to clay and other fine particles in the soil column and only slowly desorbing into the aqueous phase (groundwater). Given the relatively high clay and silt content of the soil at the site, this process is the likely factor causing the relatively steady-state levels of 1,2-DCP in the groundwater.

Whether the source term of the 1,2-DCP is in a Non Aqueous Phase Liquid (NAPL) form is not known. The compound would not need to exist in the form of a NAPL in order to behave as such once sorbed onto clay and fines. High aqueous concentrations such as those discharged as rinseate into the sump would behave similarly. The location of the affected aquifer soils is likely in the immediate vicinity of the former release areas (i.e. sump). Once the higher concentrations of 1,2-DCP begin to diminish on the clay and fines, the contaminant levels will likely begin to drop relatively rapidly. The timeframe for this cannot be determined because the current mass within the soil and rate of desorption is unknown.

Given the high affinity of 1,2-DCP to go into the vapor phase, once the compound is desorbed into the groundwater, it likely volatilizes relatively quickly into the soil gas. This process can also be accelerated by the seasonal rise and fall of the water table. This exposes more of the soil to the atmosphere as the water table lowers.

The compound 1,2-DCP is also rated as a relatively biodegradable compound according to EPA technical documents (USEPA, Natural Attenuation Short Course Proceedings, 1997). Therefore, biodegradation could also be affecting contaminant concentrations. This process has not been specifically studied at this site. However, the specific documentation of this process is academic given the historic shrinkage and continued stability of the contaminant plume. Either or both of these processes (biodegradation and volatilization) are likely contributing to the stability of the contaminant plume. With the velocity of the groundwater at approximately 9.5 feet per year and the size of the plume shrinking, destructive processes are obviously occurring at a higher rate than plume migration and contaminant mass flux. Without natural attenuation, the plume would be expected to migrate downgradient at the same velocity as the regional groundwater (9.5 feet/year).

The trend data for well MW-105 support the concept that natural attenuation is successfully reducing contaminant concentrations and stabilizing the plume. However, natural attenuation will not likely allow the plume to reach the cleanup levels. This is supported by the behavior of contaminant concentrations in well MW-104 which have stabilized above the cleanup levels for the past four years. It is unknown when, or if, contaminant levels in these wells could reach cleanup levels.

6.0 Justification for TI Waiver

The U.S. EPA guidance on Technical Impracticability (Directive 9234.2-25) states that EPA must evaluate whether groundwater restoration is attainable at a Superfund site from an engineering perspective. That evaluation must generally include the following components based on site-specific information and analysis. The following presents a summary of each of the components as it relates to this site.

1) Specific ARAR for which the TI determination is sought.

The EPA plans to amend the ROD and select an alternate remedy because the cleanup level of 10 μg/l for 1,2-DCP (based on a health advisory) cannot be attained. The ROD amendment process requires a re-examination of ARARs. In 1992, subsequent to the signed ROD, the U.S. EPA promulgated an MCL of 5 μg/l for 1,2-DCP which was adopted by the State. The alternate remedy which will replace the original remedy will consist of plume containment, institutional controls, monitoring and a TI waiver of the MCL for 1,2-DCP. The U.S. EPA intends to invoke a technical impracticability waiver for the MCL for 1,2-DCP since it is more stringent than the cleanup level set in the 1985 ROD and therefore even less likely to be attained. For this reason, the MCL for 1,2-DCP will be waived based on the technical impracticability of attaining 5 μg/l or less in the groundwater. All other constituents of concern have been remediated to below cleanup levels.

2) Spatial area over which the TI decision will apply.

The area over which the TI waiver will apply is the current areal and vertical extent of the contaminant plume for which the concentrations of 1,2-DCP exceed 5 μg/l. That area is approximately 5000 square feet in size and is depicted in Figure 4. The thickness of the TI zone extends to the depth of the uppermost aquifer (30 feet bgs). That results in an average plume thickness of approximately 20 to 27 feet. Once the waiver is applied, the site will have met all cleanup criteria and can be delisted.

3) Conceptual model that describes the site geology, hydrogeology, contamination sources, transport, and fate.

The above discussions of the geology, hydrogeology, and source evaluation present the details comprising the site conceptual model. Additional details are provided in the site RI report (1985).

4) Evaluation of the restoration potential of the site.

a) Contaminant sources for the 1,2-DCP have been identified and removed through source removal and cleanup efforts. No further source removal activities are indicated at this time.

b) Completed remedial actions have performed appropriately and reasonable upgrades and modifications have been made to enhance mass removal. The groundwater treatment system has operated efficiently and effectively as designed. No shutdowns or mechanical difficulties were encountered with the system during its operation since 1990. No other reasonable remedial action could effectively restore the groundwater to cleanup levels.

c) The current remedial system in place at the site consists of a pump and treatment system. Based on the believed behavior of the contaminant in aquifer soils and the rate of contaminant reduction, it is unknown when, or if, cleanup levels could be reached. The same rate of cleanup is expected if the remedial system is removed and levels are allowed to degrade naturally. However, natural attenuation is not a reasonable remedy at the site because it is unknown whether natural processes will ever result in attaining cleanup levels over the entire plume. Further, the same rate of contaminant reduction is observed whether or not the pump and treatment system is operation.

d) Based on the mechanics of the source term in the groundwater (sorption onto soil clay and fines) no other remedies, either conventional or innovative, could be reasonably expected to remediate the contaminant to cleanup levels.

5) Estimated costs of the existing remedy.

The remedy in place at the site had a capital cost of approximately $2.7 million. The annual operation and monitoring cost is approximately $25,000 per year when the system is operating. To date, approximately $ 4.2 million have been expended on site remediation.

6) Other considerations.

It is anticipated that monitoring of the groundwater conditions at the site will continue indefinitely under the direction of the State of California DTSC. It is EPA's intent that semiannual sampling of the four monitoring wells continue and land restrictions be imposed. Land restrictions would assure that no nearby use of the groundwater affects plume migration as long as contaminant levels remain above cleanup levels. All of the surrounding land at the site is owned by Del Norte County so that land restriction controls should be easily implemented.

7.0 Conclusion

Based on the above, the U.S. EPA judges that remediation of the aquifer to the MCL for

1,2-DCP is not practicable from an engineering standpoint. Therefore, a TI waiver of the MCL for 1,2-DCP is appropriate for this site.

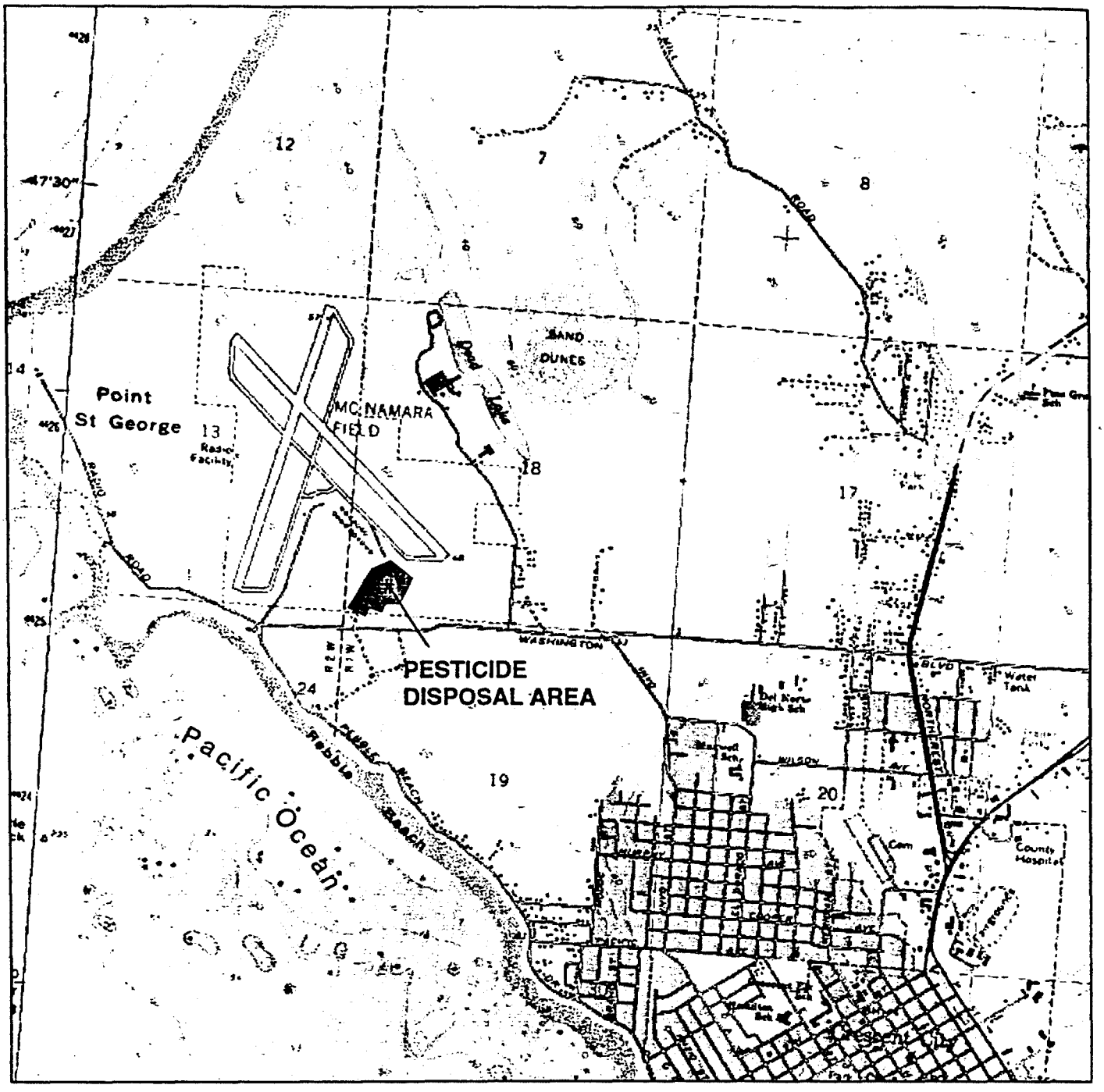
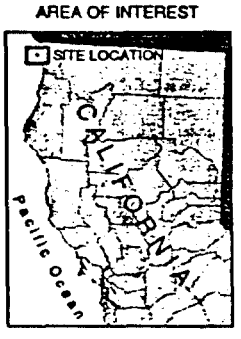
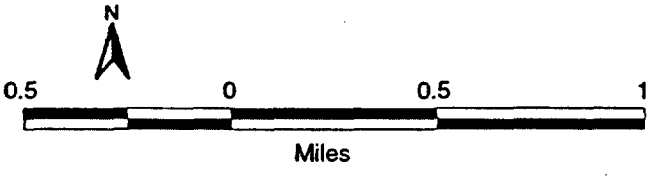


Figure 1: Site map





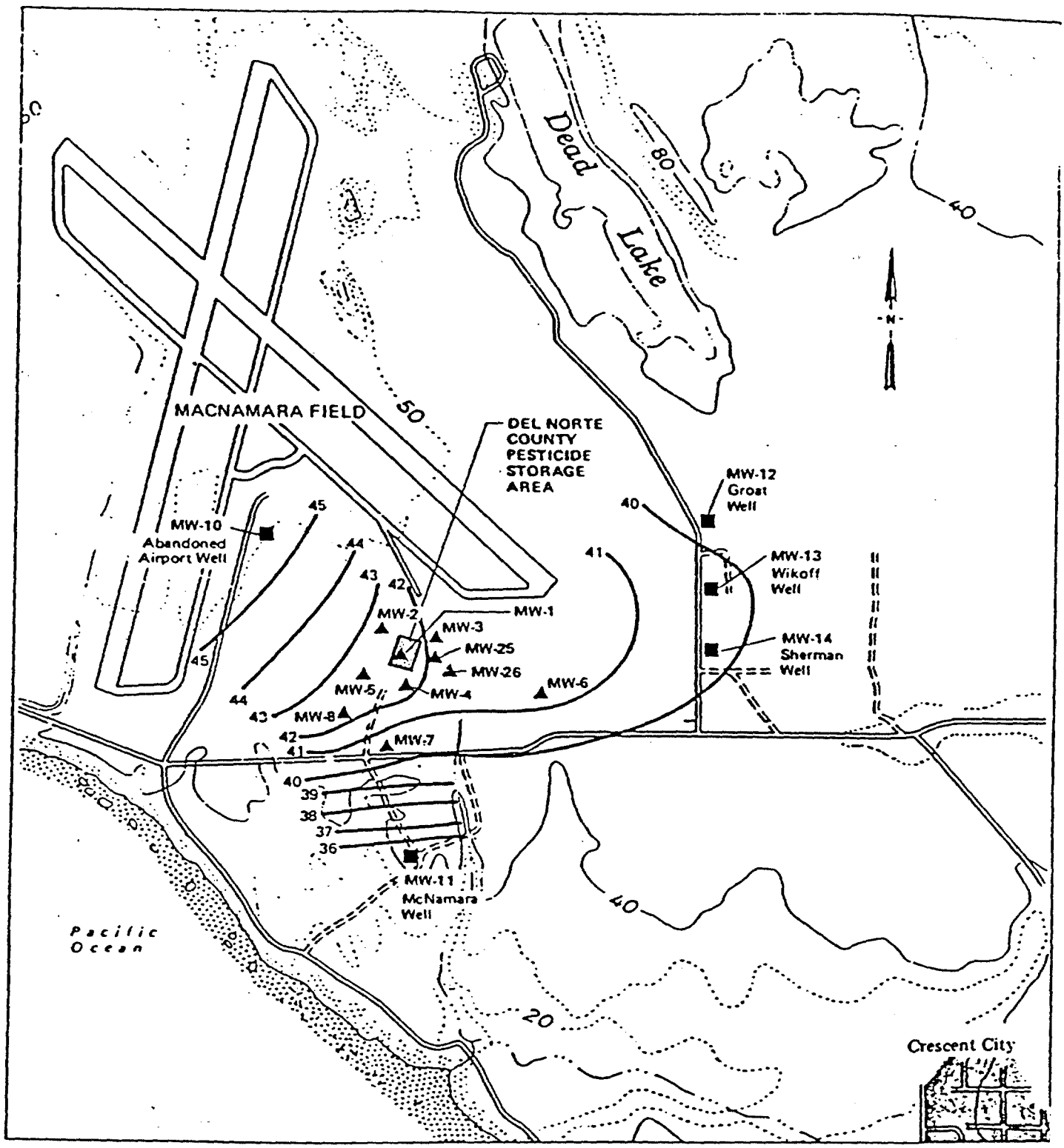


Figure 2. Monitoring Well Locations and April Groundwater Contours
Del Norte County Pesticide Storage Area Site

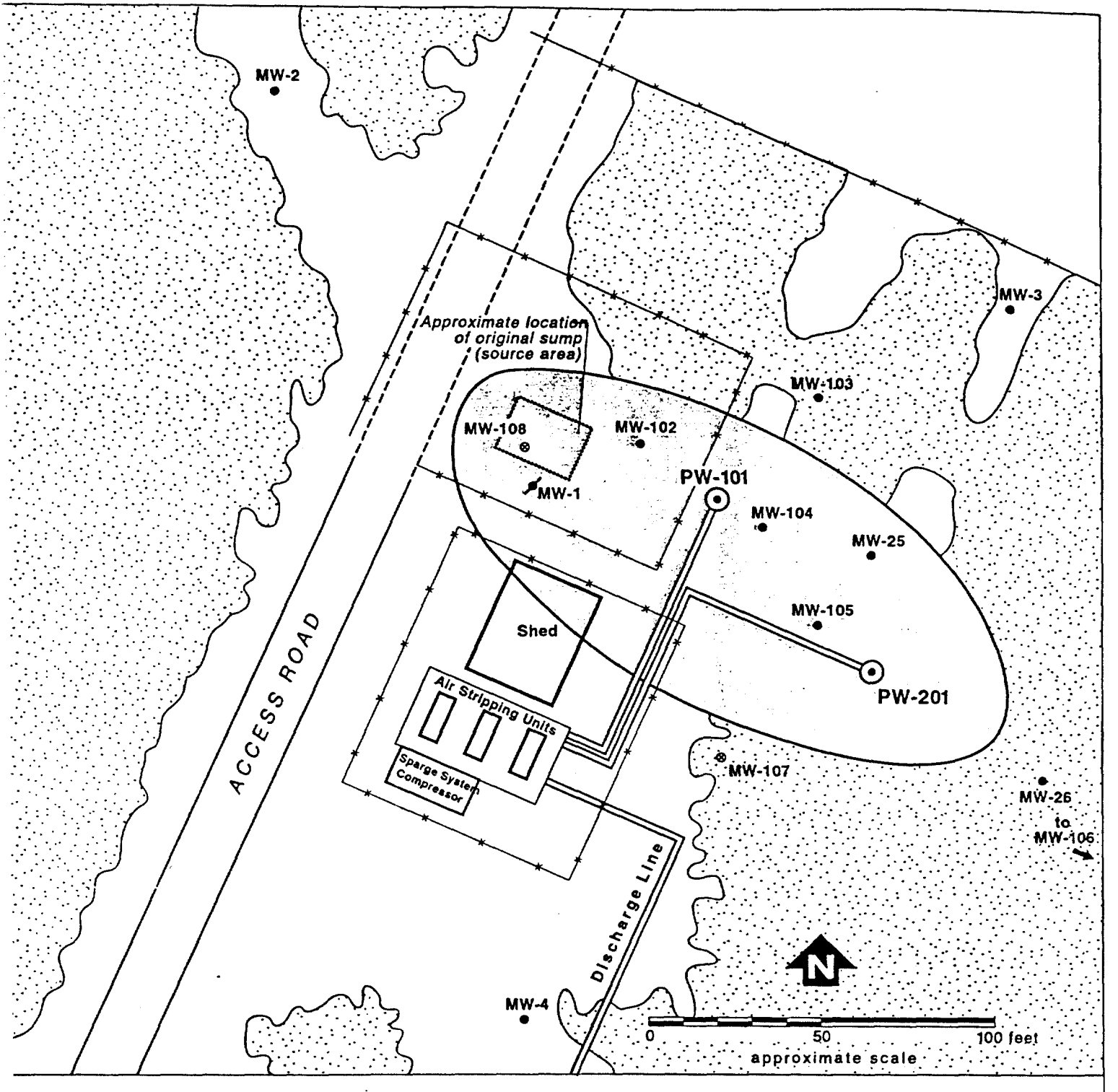


Figure 3: Areal Extent of 1,2 DCP Concentrations > 5 ppb

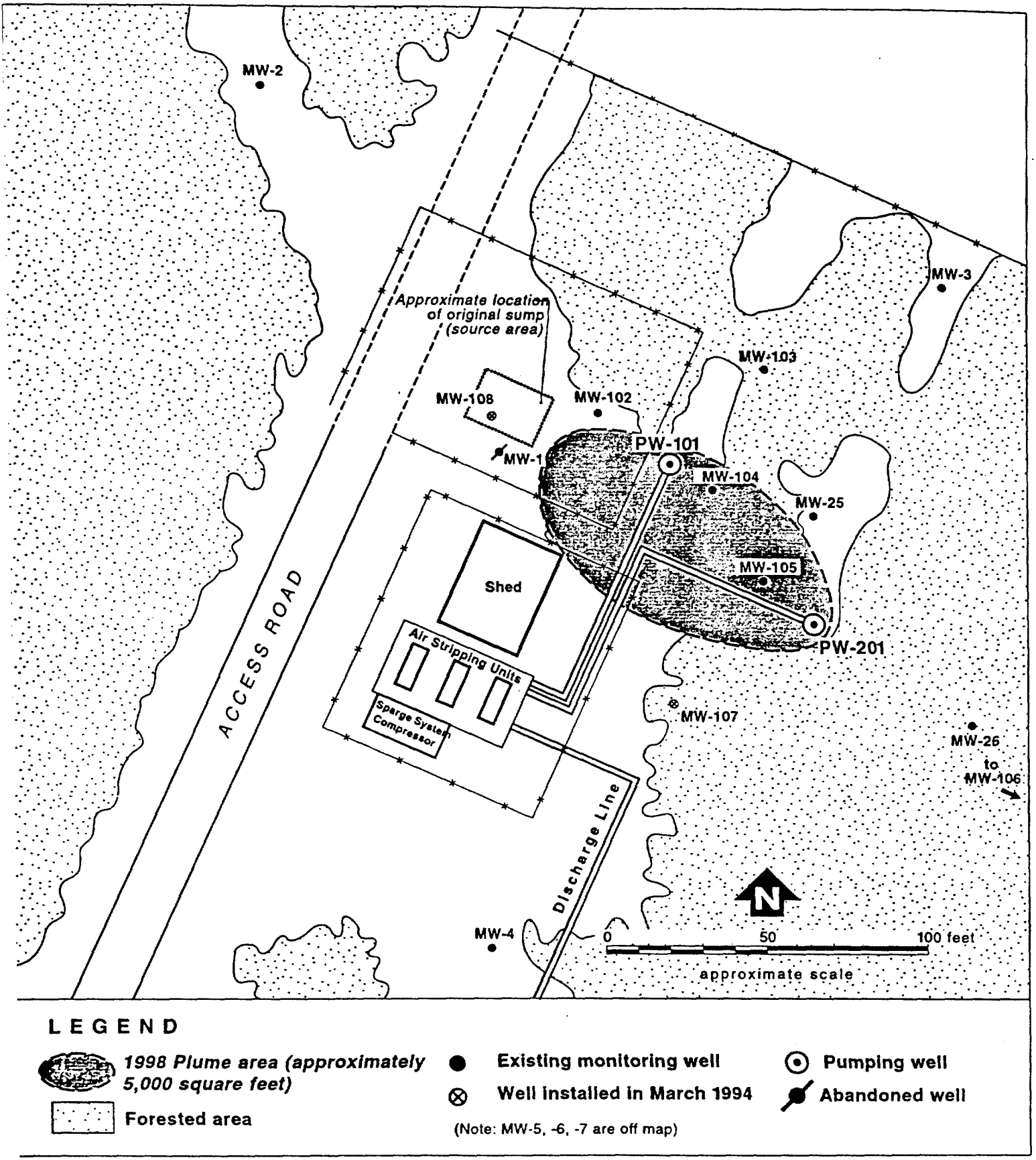
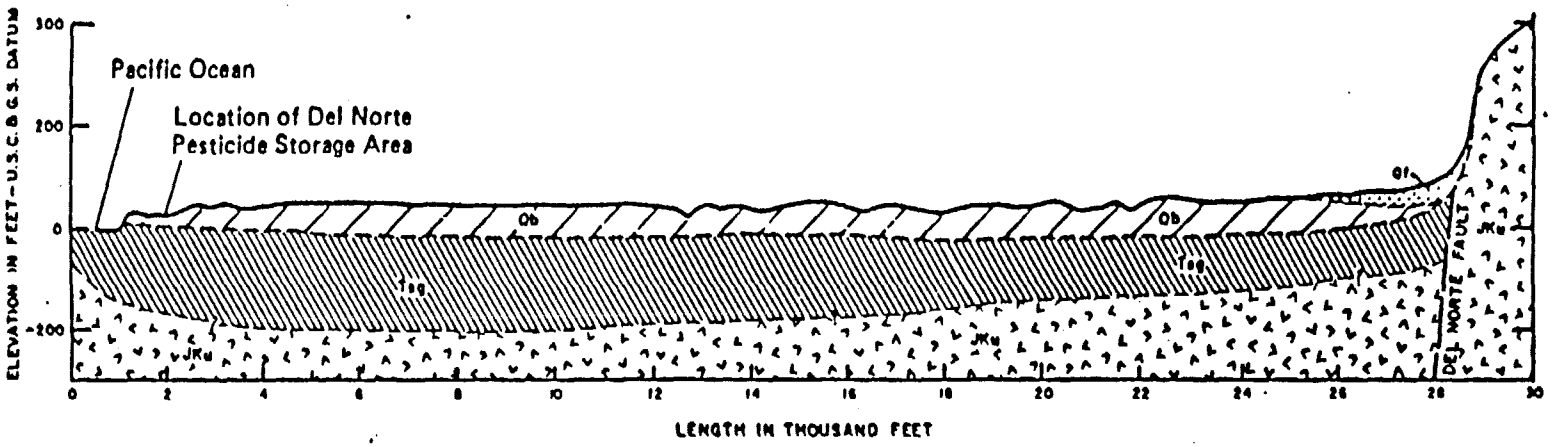


Figure 4: Areal Extent of 1,2 DCP Concentrations > 5 ppb



Qf — ALLUVIAL FAN DEPOSITS
POORLY SORTED ANGULAR ROCKS IN A SILTY CLAY MATRIX. POORLY PERMEABLE, BUT MAY YIELD SUFFICIENT WATER FOR DOMESTIC WELLS.

Qb — BATTERY FORMATION
COMPACT MARINE TERRACE DEPOSITS OF FINE SAND AND CLAY. POORLY TO MODERATELY PERMEABLE, GENERALLY YIELDS ONLY SMALL QUANTITIES TO WELLS.

Tsg — ST. GEORGE FORMATION
CONSOLIDATED MARINE SAND AND CLAYSTONE. UNDERLIES SOUTH ONE-HALF OF AREA BENEATH BATTERY FORMATION. DOES NOT YIELD WATER TO WELLS.

JKu — BEDROCK SERIES
UNDIFFERENTIATED SERIES OF CONSOLIDATED AND HIGHLY DEFORMED SANDSTONE, SHALE, CHERT, CONGLOMERATE, SERPENTINE, AND VARIOUS METAMORPHIC ROCKS. UNDERLIES ENTIRE AREA AT DEPTH. ESSENTIALLY IMPERMEABLE AND YIELDS LITTLE OR NO WATER TO WELLS.

Source: State of California, 1966

Figure 5. Geologic Section Through the Del Norte Site

Figure 6
Ground Water Concentrations of 1,2-DCP
March 1990 - June 1994
Del Norte Pesticides Site PAN: 0010DNRAXX TDD: 09-9601-0010

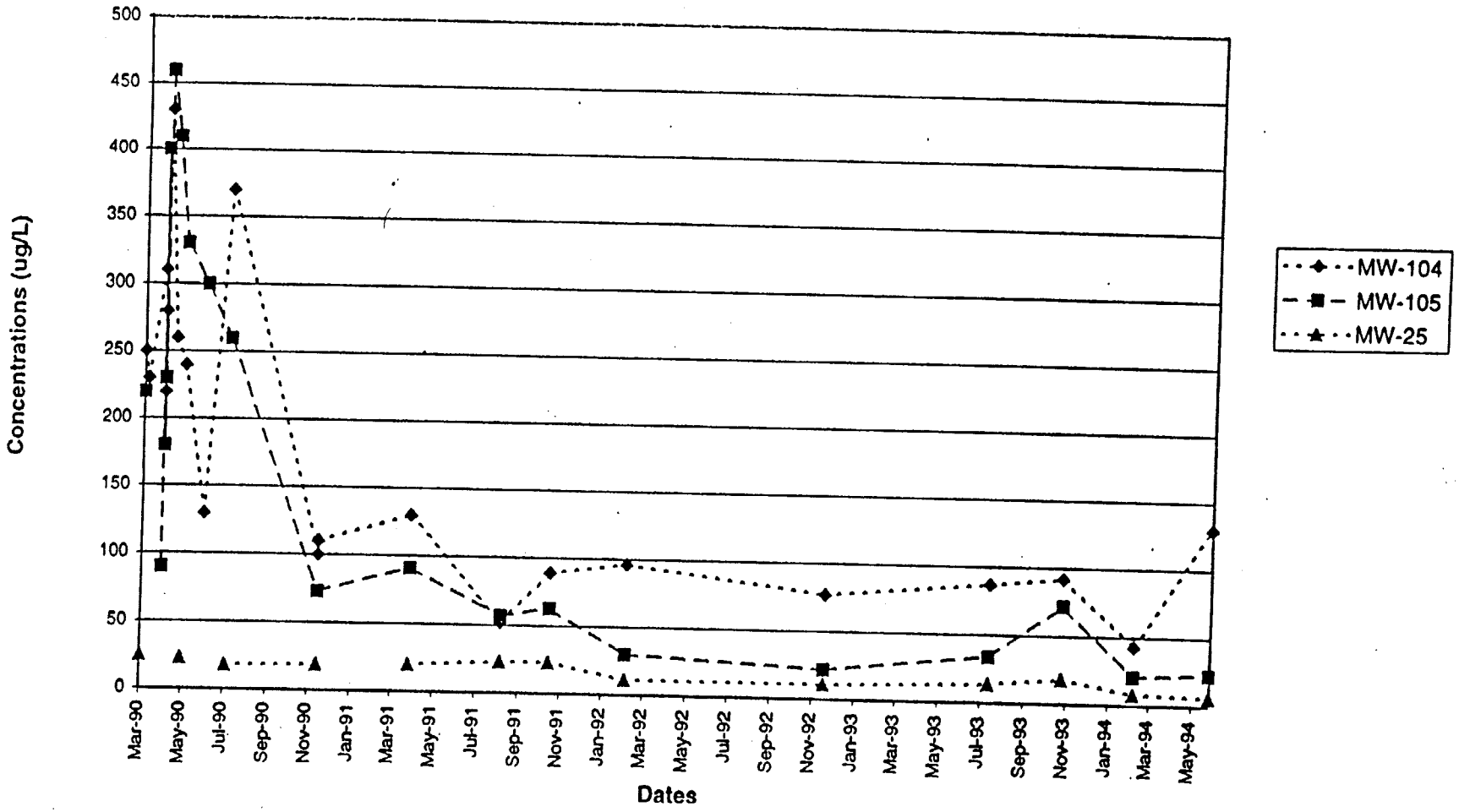
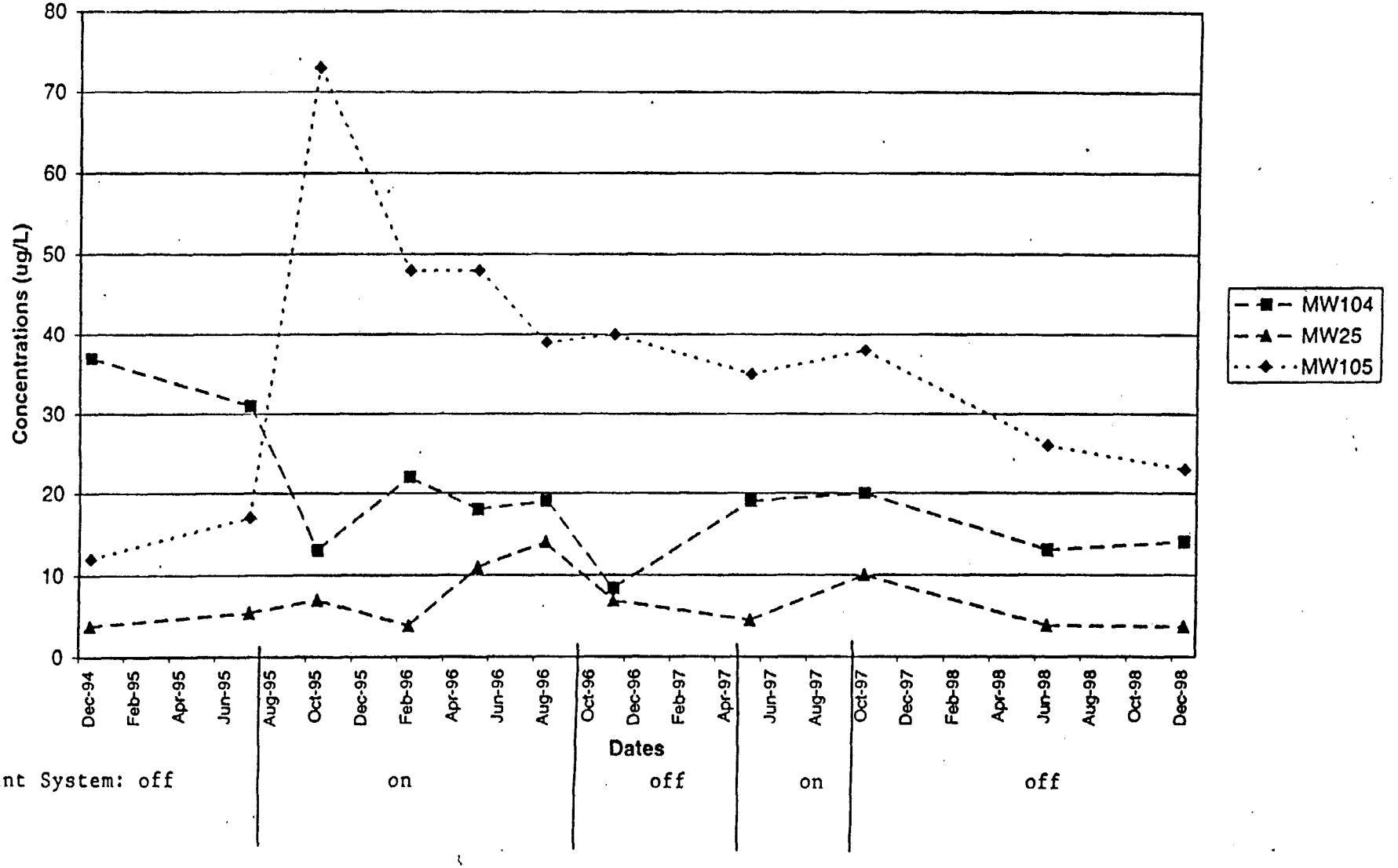
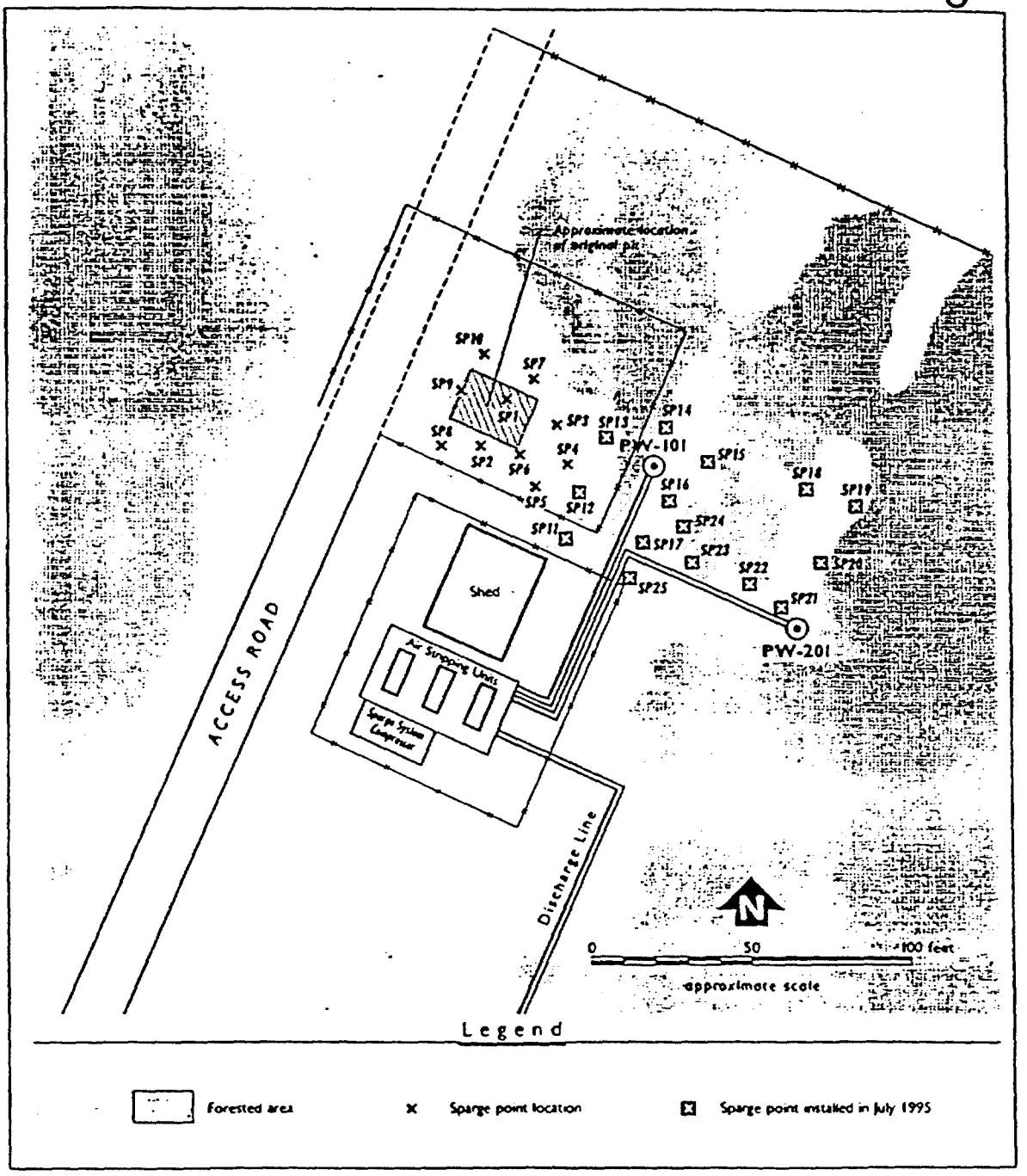


Figure 7
Selected Groundwater Monitoring Wells
Plotted comparison of 1,2 DCP Concentrations
Del Norte Pesticides Site PAN: 0010DNRAXX TDD: 09-9601-0010





00100NRAXXLb (T20) 08/10/96

Figure 8.

SPARGE POINT LOCATIONS

Del Norte Pesticides NPL Site

Crescent City, California

ATTACHMENT B

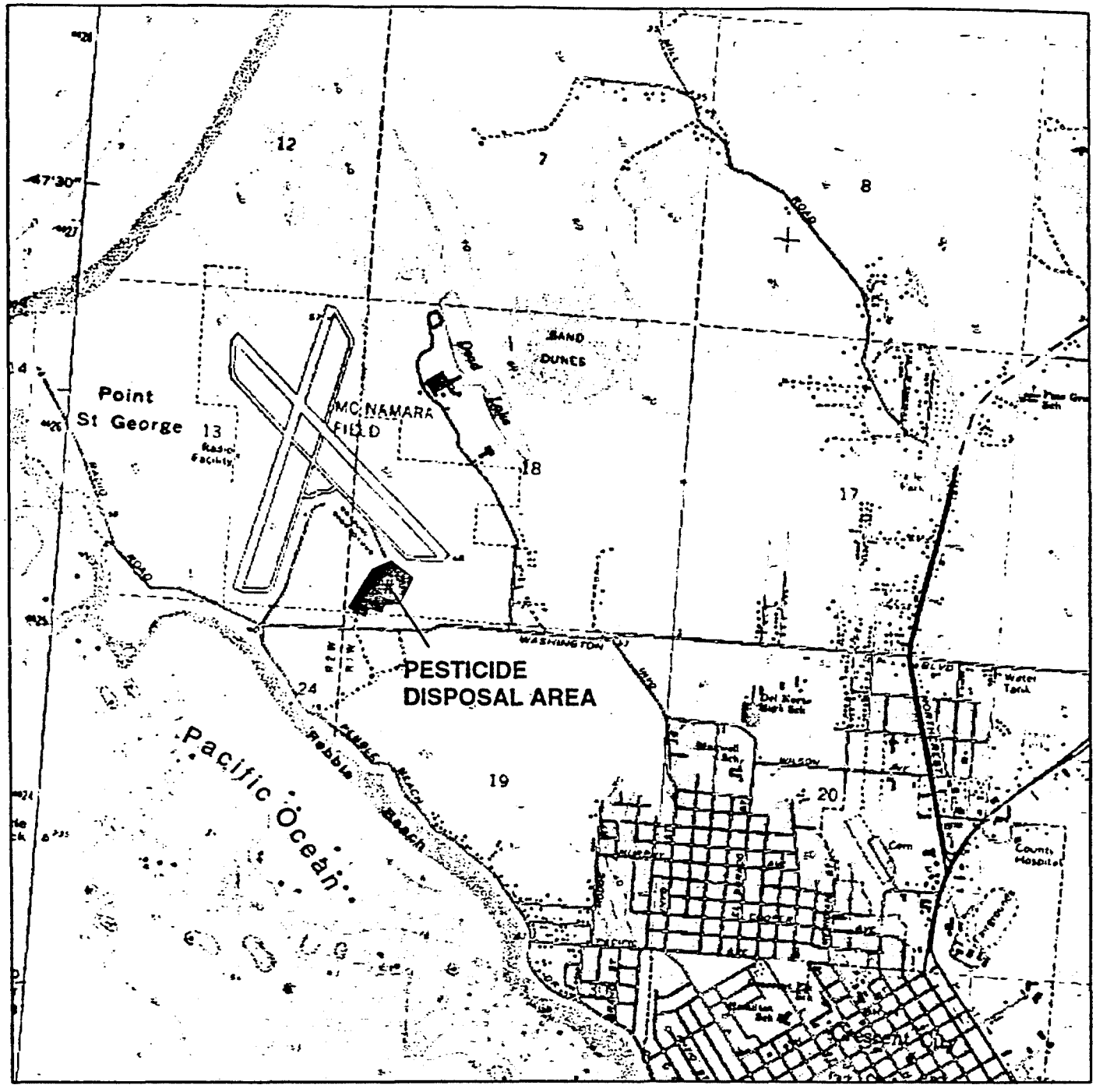
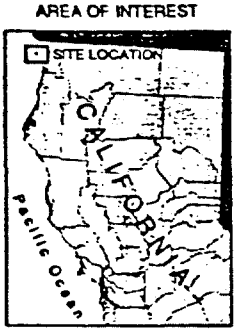
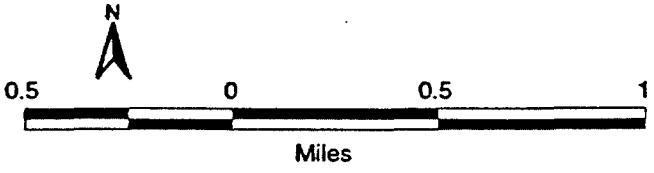


Figure 1: Site map





ATTACHMENT C

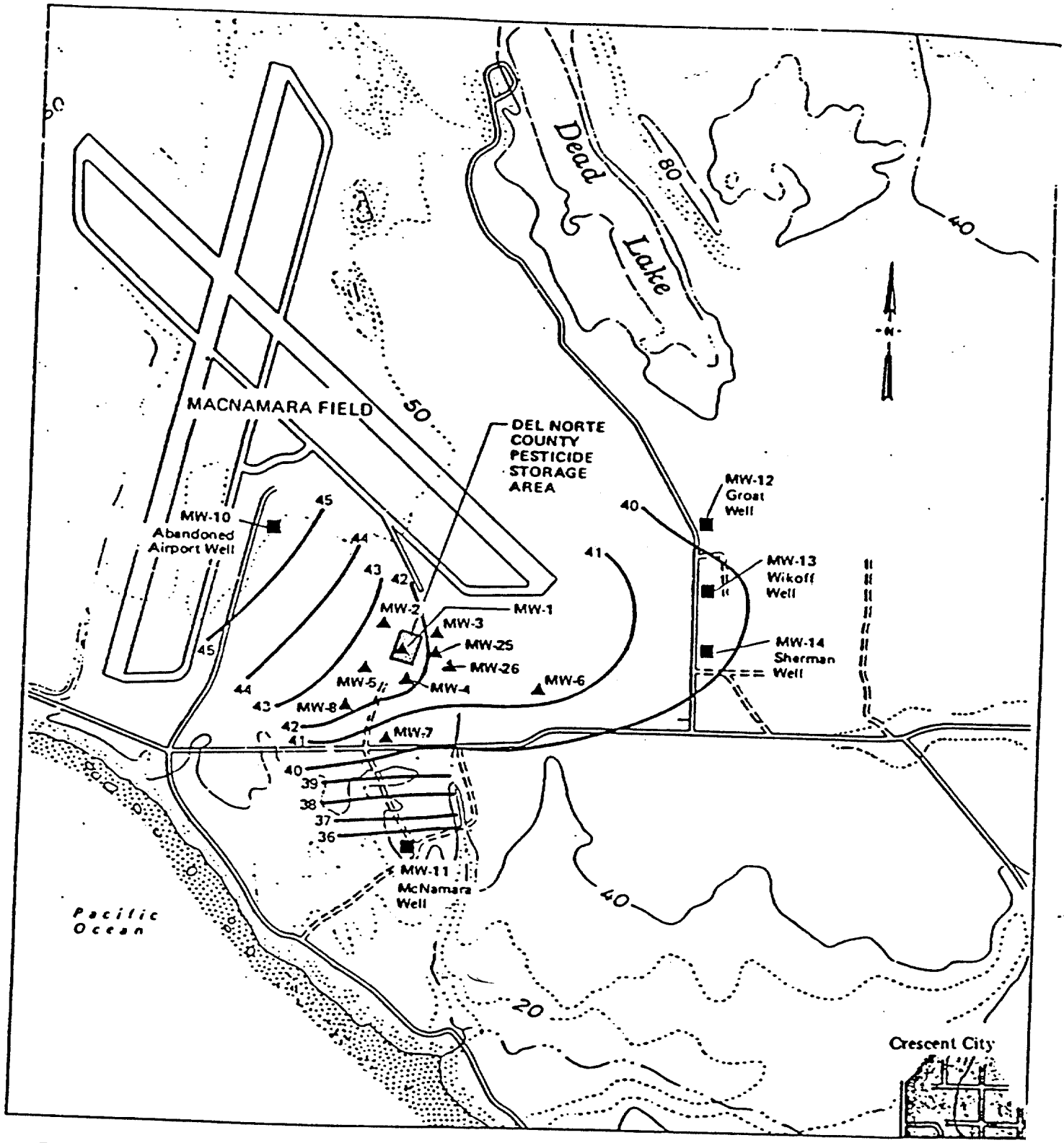


Figure 2. Monitoring Well Locations and April Groundwater Contours
Del Norte County Pesticide Storage Area Site

ATTACHMENT D

Jack McNamara EPA Parcel Legal Description

[[Legal Description: EPA_GRID]]
The True Point of Beginning bears S88°29'07"E 135.000 Feet from the SECTION CORNER 13/18/19/24; thence N1°18'00"E for 744.000 Feet; thence S88°29'07"E for 418.000 Feet; thence S44°32'46"E for 1072.202 Feet to the W1/16 SECTION 18/19; thence S44°32'46"E for 215.000 Feet to the approximate northerly right-of-way of Washington Boulevard; thence along said right-of-way, 772.000 Feet radius curve to the Right (chord bears S78°32'00"W 293.450 Feet) 295.246 Feet; thence S89°24'14"W for 1055.911 Feet along the approximate northerly right-of-way to a point S1°18'00"W for 254.000 Feet from the True Point of Beginning.

ATTACHMENT E

RECORDING REQUESTED BY:
County of Del Norte

WHEN RECORDED, MAIL TO:

Barbara J. Cook, P.E., Chief
Department of Toxic Substances Control
Northern California - Coastal
Cleanup Operations Branch
700 Heinz Avenue, Suite 200
Berkeley, California 94710-2721

SPACE ABOVE THIS LINE RESERVED FOR RECORDER'S USE

COVENANT TO RESTRICT USE OF PROPERTY
(Health and Safety Code section 25355.5)

ENVIRONMENTAL RESTRICTION (Civil Code section 1471(c))

(Re: Del Norte Pesticide Storage Area @ 2650 Washington Boulevard, Crescent City, Del Norte County, California, Parcel #s: 120-020-36)

This Covenant and Agreement ("Covenant") is made by and between the County of Del Norte, a county of the State of California (the "Covenantor"), the current owner of property situated near the community of Crescent City, County of Del Norte, State of California, described and depicted in Exhibit "A", attached hereto and incorporated herein by this reference (the "Property"), and the California Department of Toxic Substances Control ("the Department"). Pursuant to Civil Code section 1471(c), the Department has determined that this Covenant is reasonably necessary to protect present or future human health or safety or the environment as a result of the presence on the land of a hazardous material as defined in Health and Safety Code ("HSC") section 25260. The Covenantor and the Department, collectively referred to as the "Parties", hereby agree, pursuant to Civil Code section 1471(c) and HSC section 25355.5 that the use of the Property be restricted as set forth in this Covenant. The Parties further intend that the provisions of this Covenant also be for the benefit of the U.S. Environmental Protection Agency ("U.S. EPA") as a third party beneficiary.

ARTICLE I
STATEMENT OF FACTS

1.01. The Property is owned by the County of Del Norte and is more particularly described and depicted in Exhibit "A". An area overlying groundwater contaminated by 1,2-Dichloropropane is within the Property. The Property is more specifically described as Del Norte County Assessor's Parcel Number: 120-020-36.

1.02. A hazardous substance, as defined in HSC section 25316; section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. § 9601(14); and 40 Code of Federal Regulations ("C.F.R.") §§ 261.3 and 302.4 remains on portions of the Property.

1.03. U.S. EPA has been remediating the Property. The Property is part of the Del Norte County Pesticide Storage Area National Priorities List (NPL) site (Site ID No. 0900923; CERCLIS: CAD000626176) and is being remediated pursuant to a Record of Decision and an Amendment to the Record of Decision pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), 42 U.S.C. Sections 9601 et seq., and with the National Contingency Plan (40 C.F.R. Part 300), administered by the U.S. EPA. The U.S. EPA circulated the Remedial Investigation Report, Feasibility Study and Proposed Plan for public review and comment. The Record of Decision was approved by U.S. EPA on September 30, 1985 and identified excavation and off-site disposal of contaminated soil and extraction and treatment of contaminated groundwater as primary components of the remedy. Contaminated soil has been remediated as required by the Record of Decision. A groundwater extraction and treatment system operated continuously from April 1990 to December 1994. There were two shutdowns of approximately six-months duration in 1995 and 1996 and the groundwater and extraction system was permanently shut down in October 1997. The purpose of the shutdowns was to determine the effect on mass removal and contaminant concentrations. U.S. EPA ultimately concluded that the observed rate of contaminant reduction was the same whether or not the groundwater extraction and treatment system was operating. This conclusion lead to U.S. EPA approving the Amendment to the Record of Decision on August 29, 2000 that changed the groundwater part of the remedy from extraction and treatment to containment through natural attenuation with semi-annual sampling of selected groundwater monitoring wells. Semi-annual groundwater sampling performed since system operation was discontinued indicates that concentrations of 1,2-Dichloropropane are declining slowly. Because 1,2-Dichloropropane, a hazardous substance, as defined in HSC section 25316 and a hazardous material as defined in HSC section 25260, will continue to remain in groundwater under portions of the Property, the Amendment to the Record of Decision provides that institutional controls to prevent human exposure to contaminated groundwater be required as part of the site remediation.

1.04. The restrictions set forth in this Covenant are necessary to preclude potential future human exposure to 1,2-Dichloropropane.

ARTICLE II
DEFINITIONS

2.01. Department. "Department" means the California Department of Toxic Substances Control and includes its successor agencies, if any.

2.02. U.S. EPA. "U.S. EPA" means the United States Environmental Protection Agency and includes its successor agencies, if any.

2.03 Owner. "Owner" means the Covenantor, its successors in interest, and their successors in interest, including heirs and assigns, who at any time hold title to, or an ownership interest in, all or any portion of the Property.

2.04. Occupant. "Occupant" means any Owner and any person or entity entitled by ownership, leasehold, or other legal relationship to the right to occupy any portion of the Property.

2.05. CERCLA Lead Agency. "CERCLA Lead Agency" means the governmental entity having the designated lead responsibility to implement response action under the National Contingency Plan ("NCP"), 40 C.F.R. Part 300. U.S. EPA is the CERCLA Lead Agency at the time of the recording of this instrument.

2.06 Covenantor. "Covenantor" means the County of Del Norte, and includes its successors, if any.

2.07 Groundwater monitoring wells "Groundwater monitoring wells" means the wells that are to remain on the Property as required by the Amendment to the Record of Decision. These wells include four groundwater monitoring wells, MW-26, MW-104, MW-105, and MW-107, and two former extraction wells, PW-101 and PW-201.

ARTICLE III
GENERAL PROVISIONS

3.01. Restrictions to Run with the Land. This Covenant sets forth protective provisions, covenants, restrictions, and conditions (collectively referred to as "Restrictions"), subject to which the Property and every portion thereof shall be improved, held, used, occupied, leased, sold, hypothecated, encumbered, and/or conveyed. Each and every Restriction: (a) runs with the land pursuant to HSC section 25355.5 and Civil Code section 1471; (b) inures to the benefit of and passes with each and every portion of the Property; (c) is for the benefit of, and enforceable by the Department; (d) is for the benefit of U.S. EPA as a third party beneficiary; and (e) is imposed upon the entire Property unless expressly stated as applicable only to a specific portion thereof.

3.02. Binding upon Owners/Occupants. The Covenantor and all successive Owners and Occupants of the Property are expressly bound hereby for the benefit of the Department and U.S. EPA. Pursuant to HSC section 25355.5, this Covenant binds all owners and occupants of the Property, their heirs, successors, and assignees, and the agents, employees, and lessees of the owners, heirs, successors, and assignees.

3.03. Written Notice of the Presence of Hazardous Substances. At least 30 days prior to the sale, lease, sublease, rental, assignment, other transfer, or conveyance of any interest in the Property or any portion thereof, including fee interests, leasehold interests, and mortgage interests, the owner, lessor, assignor, or other transferor shall give the buyer, lessee, assignee, or other transferee written notice that a hazardous substance is located on or beneath the Property and notice of this Covenant that confers a right of access to the Property and that confers a right to enforce restrictions on the use of the Property and obligations associated with the Property as set forth in Article IV of this Covenant.

3.04. Incorporation into Deeds, Leases, and Subleases. The Restrictions set forth herein shall be incorporated by reference in each and all deeds, leases, subleases, rental agreements, assignments, or other transfers of all or any portion of the Property which are hereafter executed or renewed. Further, each Owner or Occupant shall include in any instrument conveying any interest in all or any portion of the Property, including but not limited to deeds, leases, and mortgages, a notice which is in substantially the following form:

> **NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO AN ENVIRONMENTAL RESTRICTION AND COVENANT TO RESTRICT USE OF PROPERTY, RECORDED IN THE PUBLIC LAND RECORDS ON __[DATE]__, IN BOOK ____, PAGE ____, IN FAVOR OF AND ENFORCEABLE BY THE CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL AND FOR THE BENEFIT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY.**

3.05. Conveyance of Property. The Owner shall provide notice to the Department and to U.S. EPA not later than thirty (30) days before any conveyance or other transfer of any ownership interest in the Property (excluding mortgages, liens, and other non-possessory encumbrances). The Department and U.S. EPA shall not, by reason of this Covenant, have authority to approve, disapprove, or otherwise affect a proposed conveyance or transfer, except as otherwise provided by law, by administrative order, or by a specific provision of this Covenant.

ARTICLE IV
RESTRICTIONS AND OBLIGATIONS

4.01. Prohibited Uses. Future use of the Property shall be restricted to industrial and/or commercial use only, and the Property shall not be used for any of the following purposes:

(a) A residence, including but not limited to any mobile home or factory built housing, constructed or installed for use as residential human habitation.
(b) A hospital for humans.
(c) A public or private school for persons under 21 years of age.
(d) A day care center for children.

4.02. Non-Interference with Groundwater Monitoring Wells and Contaminated Groundwater. Covenantor agrees:

(a) Installation and/or pumping of any water-producing wells, including but not limited to water supply, irrigation, or private wells shall not be permitted on the Property.
(b) Use of contaminated groundwater shall be prohibited.
(c) Activities that may damage or compromise the integrity of groundwater monitoring wells shall not be permitted.
(d) Groundwater monitoring wells shall be maintained and protected from physical damage.
(e) Groundwater monitoring wells shall not be altered or destroyed without prior written approval by the Department.

4.03. Soil Management. Any contaminated soils brought to the surface by grading, excavation, trenching, or backfilling shall be managed in accordance with all applicable provisions of state and federal law, and will not be removed from the Property without following a Soil Management Plan approved by the Department.

4.04. Access for the Department. The Department shall have reasonable right of entry and access to the Property for inspection, monitoring, periodic reviews, and other activities consistent with the purposes of this Covenant as deemed necessary by the Department in order to protect the public health or safety or the environment. Nothing in this instrument shall limit or otherwise affect U.S. EPA's right of entry and access, or U.S. EPA's authority to take response actions under CERCLA, the National Contingency Plan, 40 C.F.R. Part 300 and its successor provisions, or federal law. Nothing in this instrument shall limit or otherwise affect the Department's right of entry and access under any statutory provision.

4.05. Access for Implementing Groundwater Monitoring. The entity or person responsible for implementing groundwater monitoring and maintenance of groundwater monitoring wells shall have reasonable right of entry and access to the Property for the purpose of implementing these monitoring and maintenance activities. Such right of entry and access shall continue until such time as the Department determines that such activities are no longer required.

ARTICLE V
ENFORCEMENT

5.01. Enforcement. The Department shall be entitled to enforce the terms of this instrument by resort to filing of an administrative, civil, or criminal action, as provided by law or equity, against the Owner(s) and/or Occupant(s). This Covenant shall be enforceable by the Department pursuant to Health and Safety Code, Division 20, Chapter 6.5, Article 8 (commencing with section 25180). Failure of the Covenantor, Owner, or Occupants to comply with any provision of Paragraphs 4.01 through 4.04 of this Covenant shall be grounds for the Department to require that the Covenantor, Owner or Occupants modify or remove, as appropriate, any improvements constructed or placed upon any portion of the Property in violation of the Restrictions. ("Improvements" herein shall include, but not be limited to, all buildings, roads, driveways, and paved parking areas). All remedies available hereunder shall be in addition to any and all other remedies at law or in equity, including CERCLA, and violation of this Covenant shall be grounds for the Department or U.S. EPA to file civil or criminal actions, as provided by law or equity.

ARTICLE VI
VARIANCE, TERMINATION, AND TERM

6.01. Variance. Covenantor, or any other aggrieved person, may apply to the Department for a written variance from the provisions of this Covenant. Such application shall be made in accordance with HSC section 25233. Unless and until the State of California assumes CERCLA Lead Agency responsibility for Site operation and maintenance, no variance may be granted under this paragraph without prior review and prior concurrence with the variance by U.S. EPA. If requested by the Department or U.S. EPA, any approved variance shall be recorded in the land records by the person or entity granted the variance.

6.02. Termination. Covenantor, or any other aggrieved person, may apply to the Department for a termination of the Restrictions or other terms of this Covenant as they apply to all or any portion of the Property. Such application shall be made in accordance with HSC section 25234. Unless and until the State of California assumes CERCLA Lead Agency responsibility for groundwater monitoring, no termination may be granted under this Paragraph 6.02 without prior review and prior written concurrence of the termination by U.S. EPA.

6.03. Term. Unless ended in accordance with the Termination paragraph above, by law, or by the Department in the exercise of its discretion, after review and prior written concurrence by U.S. EPA, this Covenant shall continue in effect in perpetuity.

ARTICLE VII
MISCELLANEOUS

7.01. No Dedication or Taking. Nothing set forth in this Covenant shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Property, or any portion thereof, to the general public or anyone else for any purpose whatsoever. Further, nothing set forth in this Covenant shall be construed to effect a taking under state or federal law.

7.02. Recordation. The Covenantor shall record this Covenant, with all referenced Exhibits, in the County of Del Norte within ten (10) days of the Covenantor's receipt of a fully executed original.

7.03. Notices. Whenever any person gives or serves any Notice ("Notice" as used herein includes any demand or other communication with respect to this Covenant), each such Notice shall be in writing and shall be deemed effective: (1) when delivered, if personally delivered to the person being served or to an officer of a corporate party being served, or (2) three (3) business days after deposit in the mail, if mailed by United States mail, postage paid, certified, return receipt requested:

To Owner:
Director of Community Development
County of Del Norte
Crescent City, California 95531

County Counsel
County of Del Norte
981 H Street, Suite 220
Crescent City, California 95531

To DTSC:
Barbara J. Cook, P.E., Chief
Department of Toxic Substances Control
Northern California-Coastal Cleanup Operations Branch
700 Heinz Avenue, Suite 200
Berkeley, California 94710-2721

To U.S. EPA:
Beatriz Bofill
Superfund Division (SFD-7-3)
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, California 94105-3901
Re: Del County Pesticide Storage Area Superfund Site

and:

Bethany Dreyfus, Esq.
Office of Regional Counsel, ORC-3
U.S. EPA, Region IX
75 Hawthorne Street

San Francisco, California 94105-3901
Re: Del County Pesticide Storage Area Superfund Site

Any party may change its address or the individual to whose attention a Notice is to be sent by giving written Notice in compliance with this paragraph.

In the event that the identity of any Owner or Occupant of the Property should change, the new Owner or Occupant shall notify the Department and U.S. EPA, within ten (10) days of becoming an Owner or Occupant of the Property. In the event that the address of any Owner or Occupant of the Property should change, the Owner or Occupant whose address changed shall notify the Department and U.S. EPA within ten (10) days of its change of address.

7.04. Partial Invalidity. If any portion of the Restrictions or other term set forth herein, or the application of it to any person or circumstance, is determined by a court of competent jurisdiction to be invalid for any reason, the surviving portions of this Covenant, or the application of such portions to persons or circumstances other than those to which it is found to be invalid, shall remain in full force and effect as if such portion found invalid had not been included herein.

7.05. Liberal Construction. Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed to effect the purpose of this instrument and the policy and purpose of CERCLA. If any provision of this instrument is found to be ambiguous, an interpretation consistent with the purpose of this instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.

7.06. Third Party Beneficiary. U.S. EPA's rights as a third party beneficiary of this Covenant shall be construed pursuant to principles of contract law under the statutory and common law of the State of California

7.07. Statutory References. All statutory references include successor provisions.

IN WITNESS WHEREOF, the Parties execute this Covenant.

Covenantor: County of Del Norte

By:_____ Date: _____

Martha McClure
Chair of the Del Norte County Board of Supervisors

Department of Toxic Substances Control

By:_____ Date: _____

Barbara J. Cook, P.E., Chief
Northern California Coastal Cleanup Operations Branch

STATE OF CALIFORNIA

COUNTY OF _____

On this _____ day of _____, in the year _____,

before me _____, personally appeared

_____,

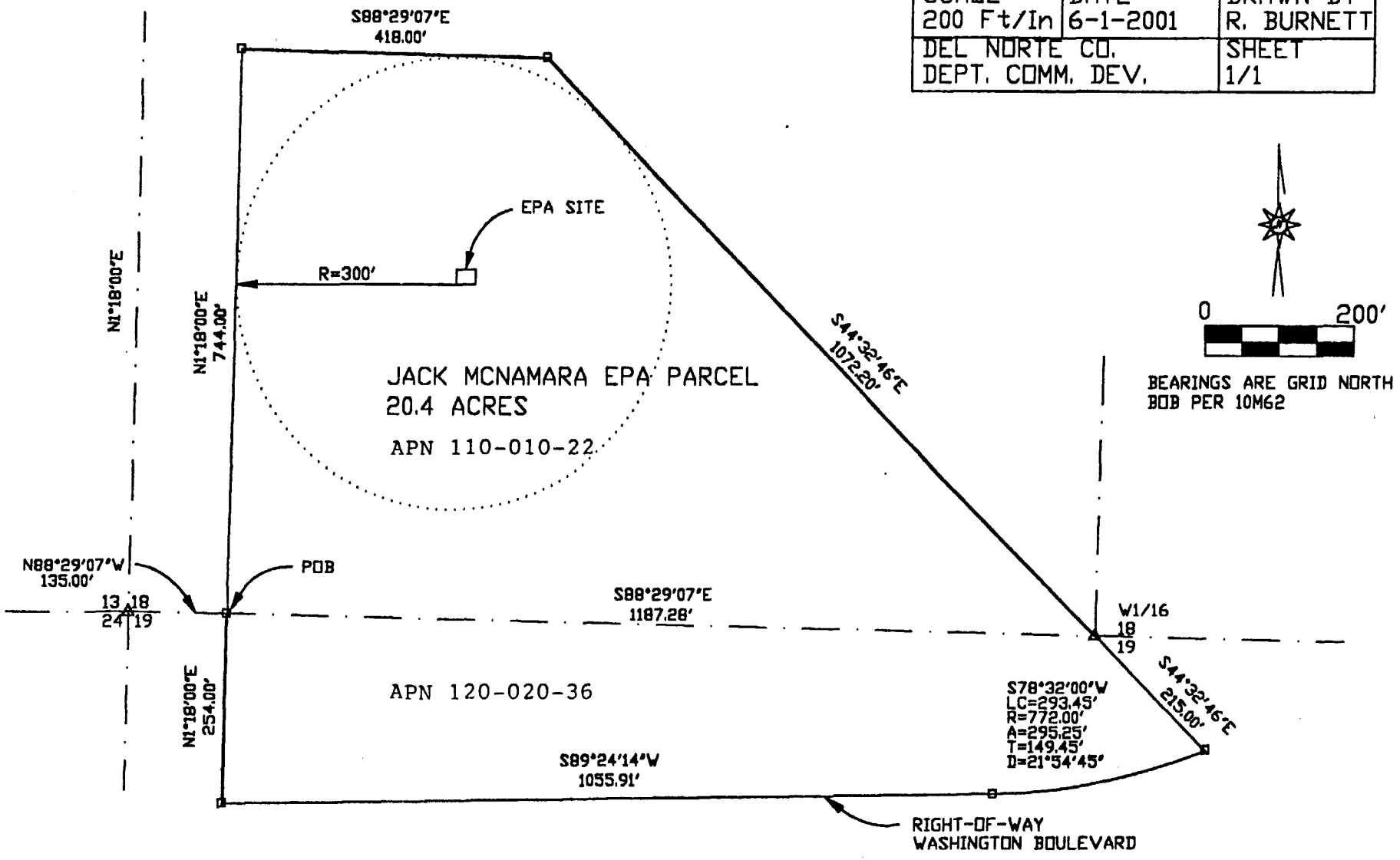
personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is /are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature _____

EXHIBIT A

JACK MCNAMARA EPA PARCEL ARPT_EPA_TRV.DWG		
SCALE 200 Ft/In	DATE 6-1-2001	DRAWN BY R. BURNETT
DEL NORTE CO. DEPT. COMM. DEV.		SHEET 1/1



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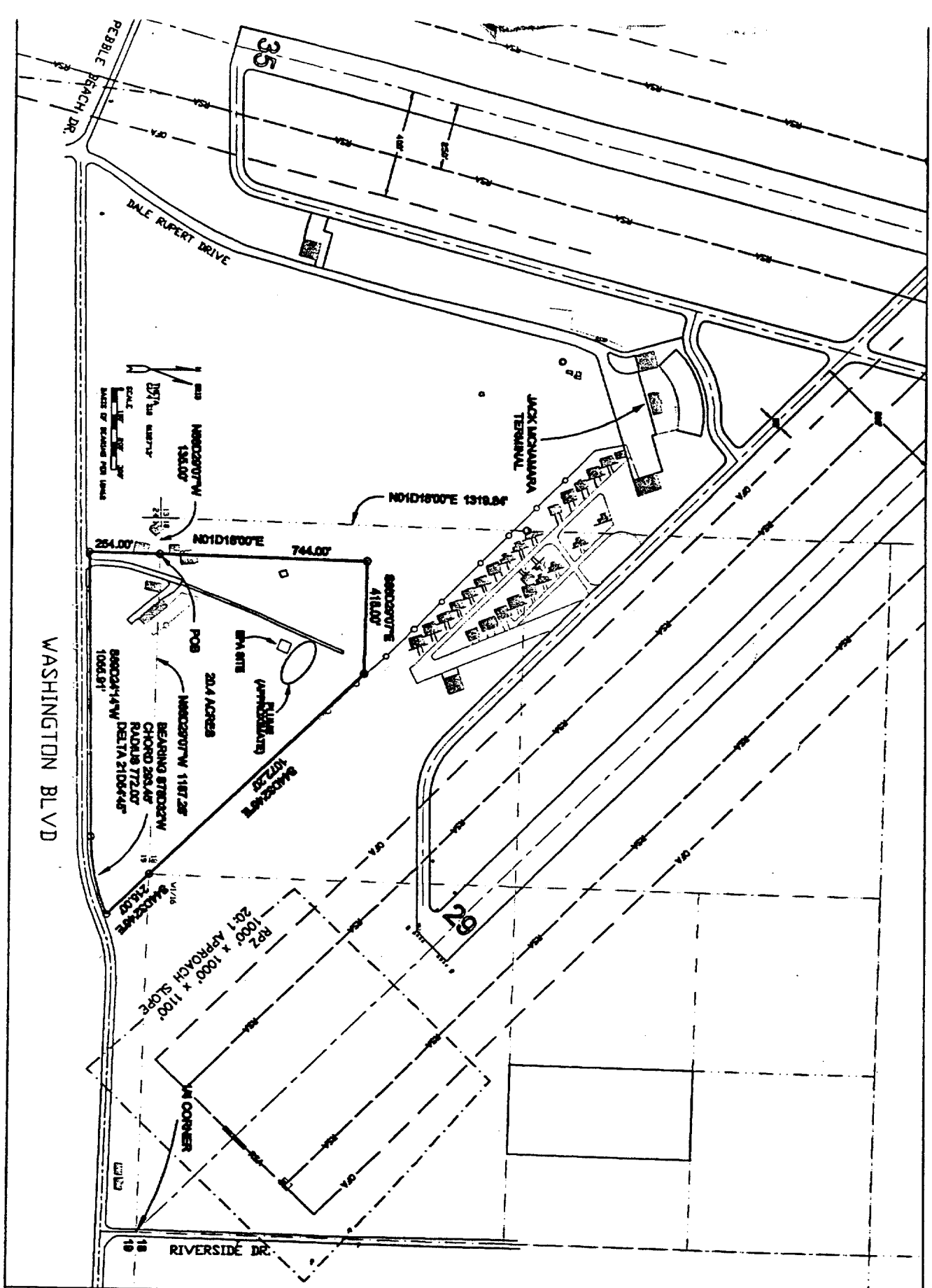
PEBBLE BEACH DR.
DALE RUPERT DRIVE
WASHINGTON BLVD
RIVERSIDE DR.
JACK MCNAMARA TERMINAL
N01D18'00"E 1319.84'
N01D18'00"E
744.00'
254.00'
N88D29'07"W 130.00'
S88D29'07"E 418.00'
POB
EPA SITE
20.4 ACRES
N88D29'07"W 1187.28'
BEARING S78D03'W
CHORD 293.48'
RADIUS 772.00'
DELTA 21D04'48"
S88D29'07"E 1072.39'
S88D34'14"W 1066.91'
S44D52'46"E 210.00'
RPZ
1000' x 1000' x 1100'
20:1 APPROACH SLOPE
NW CORNER
MCNAMARA AIRFIELD
RESTRICTED USE PARCEL
EPA AGREEMENT
County of Del Norte
Engineering & Surveying Division
981 "H" STREET, SUITE 110
Crescent City CA 95531
Ph. (707) 464-7229 Fax 465-0340
Page 1 of 1